NEED FULFILLMENT AND GOAL PERCEPTIONS OF MANAGERIAL AND SUPERVISORY HOSPITAL PERSONNEL

by

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ABSTRACT

The purpose of the present study was to examine some of the relationships between the level of performance and job satisfaction, goal perceptions, and value of rewards. The subjects for the study were the department managers and nursing supervisors of a small general hospital. Performance criteria for the subjects were obtained by convergent and discriminant analysis of superiors' ratings on a number of traits.

The data obtained, indicated that the two groups of subjects, although working in the same organization, had quite dissimilar attitudes and perceptions. The findings were interpreted as manifestations of the different organizational micro-climates in which the two groups operated.

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CHAPTER I

INTRODUCTION

GENERAL BACKGROUND

Why do people act as they do? Why do some individuals restrict their level of performance while others perform at consistently high levels? What do people want out of their jobs? What are their needs? What factors make for satisfying work relationships and job satisfaction? How are the incentives provided by work organizations related to the motivation of their members? What is "high morale" and how can it be recognized?

The above problems (as well as other related ones) have been the focus of a great deal of research interest in the past several decades. To a very large extent this interest has been stimulated by the famous Hawthorne studies which began in the late 1920's at the Hawthorne plant of the Western Electric Company. By demonstrating, quite conclusively, that workers could be motivated to increase their level of output by factors other than simple physical environmental changes or straight monetary incentives, these studies sounded the death knell for the classical view of workers as simple "economic" men and foreshadowed the modern view of workers as "motivated" men.

After the Hawthorne investigations, the study of workers'

attitudes developed rapidly. By the mid fifties, Herzberg, Mausner and Snyderman (1957) were able to find several hundred studies of workers' job attitudes. Herzberg et al also found a number of studies, as did Brayfield and Crockett (1955), that focused on the relationship between workers' job attitudes and their job behaviour. Both reviews cited over 20 studies of the relationship between satisfaction and performance.

Missing almost entirely in these two reviews, however, were studies of managers' job attitudes. This neglect is somewhat surprising since managers represent such a highly significant and visible part of the work force of any work organization. Also, since managers operate in a considerably different psychological environment from that of blue-collar workers, it is quite probable that attitude-behaviour relationships at the managerial level may differ significantly from those at the blue-collar level. Likert (1961), for example, has hypothesized that job satisfaction may be more closely related to managerial performance than it is to worker performance.

In recent years managerial attitudes have received considerably more research attention, but the area still lags far behind studies on blue-collar (and white-collar) workers. As with the early studies of blue-collar workers, studies of management jobs in industry and business have tended to concentrate on technical aspects of the jobs or on the personality traits of the individuals occupying the jobs. In the last few years however an increasing number of studies have been concerned with how psychological characteristics of management

jobs are perceived by the individuals in the jobs. (e.g. Porter, 1961; Porter, 1964; Porter and Lawler, 1968)

The imbalance in studies of workers and supervisory personnel is not limited to studies carried out in industrial and business organizations. A review of over 30 studies of nursing personnel by Hughes, Hughes and Deutscher (1958) mentions no studies directly concerned with supervisory nursing personnel. Most of the studies reviewed focused primarily on the technical aspects and functions of nursing, on the personality traits of nurses, or on differences between various types of nurses and nursing functions.

On the levels of satisfaction expressed by nurses, Hughes et al conclude that "the impression grows that salary, hours, hospital conditions, and other physical features of (the nurses') work are not the things that matter most." The hypothesis profferred by Hughes et al is that "status, recognition, and assignments fitting, in their estimation, to their station, are the hidden, unnamed reality." This would then seem to call for studies of how psychological characteristics of nursing jobs are perceived by nursing personnel. Since the review by Hughes et al, a number of such studies have been made, but supervisory nursing personnel remain relatively neglected in most studies.

Also in recent years, a number of investigators have begun to study the effects of conscious goals, intentions, desires, and purposes on task performance. The basic assumption (implicit or explicit) of this research is that an individual's conscious ideas affect what

he does; that is, his goals or intentions influence his level of performance. (e.g., Ryan, 1958; Locke, 1965)

With the above observations in mind, the study described here was undertaken to examine some aspects of the interrelationship of work and motivation for a selected group of managerial and supervisory personnel in a hospital setting.

More specifically, the study dealt with three areas central to the management and supervision of hospitals:

(1) The measurement of the level of performance or effectiveness of an individual in his job.

(2) The extent of fulfillment of and satisfaction with various characteristics of the job and the relationship of these characteristics to the level of performance.

(3) The relationship of perceived goals to the level of performance.

LEVEL OF PERFORMANCE

Every work organization must have some basis for the evaluation of its members--for purposes of allocating raises, bestowing promotions, sloughing off the deadwood, and so on. The obvious question then arises, "What criteria are used to evaluate individuals?" An equally obvious corollary is, "Can these criteria be quantified and measured?"

To the extent that clearly defined standards for evaluating performance exist in a given job, the concept of level of performance

becomes meaningful. For simple jobs and tasks these standards are usually clearly specified, so that objective criteria of the level of performance can often be obtained. But as the number of functions included in the job increases, it becomes increasingly difficult to find suitable performance criteria. Quite often the organization is forced to rely on the judgments of persons whose standards remain unspecified.

For multi-faceted jobs, perhaps the most widely-used measure of performance has been the superior's global rating of his subordinate's performance. The global evaluation has probably enjoyed its greatest popularity at the management level. The reasons for this are obvious--management jobs are usually multidimensional and hard to define, so performance in them is difficult to quantify and make objective.

Is a single criterion, whether objective or subjective, valid, or should multidimensional measures be used? This so-called "criterion problem" has been the topic of a great deal of debate and research. Thorndike (1949) proposed three categories of criteria--ultimate, intermediate, and immediate--with the ultimate criterion being the complete and final goal of any evaluation procedure. A criterion is ultimate in the sense that no further or higher standards of comparison can be found. Thorndike did however qualify himself slightly by stating that a really complete ultimate criterion would be multiple and complex in almost every case. Nagle (1953) discussed some of the problems in the development and construction of ultimate criteria in terms of four steps: defining the activity, analyzing the activity,

defining the elements of success, and developing the criteria to measure the elements of success.

The major problem in developing a single overall measure of performance appears to be the determination of the relative weights to be applied to the sub-criteria measures. But, as Guion (1965) points out, there may be elements in an individual's overall performance that simply cannot logically be combined. Dunnette (1963) argues that "an overzealous worshipping of the criterion with an accompanying will-o-the-wisp searching for the best single measure of job success" has resulted in an oversimplification of the complexities involved in the measurement of job performance.

A number of factor analytic studies of job performance have demonstrated quite persuasively the need for multidimensional measures. Peres (1962) identified six factors that served as a basis for evaluating the performance of administrative and general supervisors. Roach (1956) found fourteen factors that managers used in describing the performance of their first-line supervisors. Rush (1953) found four factors which were used to describe the performance of salesmen. And Turner (1960) identified four factors of performance for production foremen in two assembly plants.

Seashore, Indik, and Georgopoulos (1960), in a study of the intercorrelations among five job performance measures over 27 organizations, found that their data quite clearly contradicted the validity of overall job performance as an unidimensional construct. Their data also seemed to indicate that the use of a single job performance

variable as a "sample" of a set of job performance measures was not justified without first determining the interrelations among the various aspects of performance.

One rather useful multidimensional approach to the measurement of performance that has received renewed attention in recent research is the multitrait-multirater method (Campbell and Fiske, 1959; Lawler, 1967). This method appears to be potentially quite valuable since it has some of the advantages of the more objective measures and some of those of the more subjective ones. With this approach it is possible to assess a complex criterion by determining its convergent and discriminant validity, rather than depending on an objective indicator such as profits that may miss the essence of the job, or on a subjective evaluation that is subject to such biasing influences as the halo effect.

SATISFACTION, FULFILLMENT AND PERFORMANCE

Having determined the levels of performance of the individuals in a work organization, a logical question then might be, "What differences exist between the high performers and the low performers with respect to their satisfaction, attitudes, and fulfillment?" This question was the prime focus of the current study.

The terms "job satisfaction" and "job attitudes" are typically used interchangeably. Both refer to affective orientations of the individual toward his job. Positive attitudes are conceptually

equivalent to job satisfaction; negative attitudes, to job dissatisfaction. Most investigators have treated job satisfaction as a rather complex set of variables for rather compelling reasons. For example, individuals can be found who are very satisfied with their superiors, indifferent toward company policies, and very dissatisfied with their wages.

The traditional model of the relationship of job attitudes to performance assumed that managerial or supervisory actions affected job satisfactions, which in turn induced changes in performance because of the facilitative effects of satisfaction and the disruptive influences of dissatisfaction. In this kind of system performance was associated with rewards (primarily monetary) which were in turn assumed to influence satisfaction. The manipulation of incentive systems by management and unions was based on this kind of model which assumed a loop through satisfaction to performance to rewards and back to further satisfaction.

Smith and Cranny (1968) suggest that recent research indicates the possibility of a simpler and more easily conceptualized model. They postulate a three-way relationship among job satisfaction, effort, and rewards. These variables are viewed as occupying the three corners of a triangle, with any variable having causal effects on any other variable, either alone or in conjunction with the third. At the centre of the triangle lies performance, which can influence both satisfaction and rewards, but not effort. Conversely only effort can influence the level of performance.

The one variable in this formulation which can be directly altered by management is rewards. Management can affect productivity or satisfaction only indirectly through appropriately structuring the way in which rewards will be viewed by the members of the organization.

Another, basically equivalent, model is given by Georgopoulos, Mahoney and Jones (1957). Their path-goal approach is based on the assumption that an individual's level of performance is a function of, among other things, his motivation to produce at a given level. This motivation in turn depends upon (1) the particular needs of the individual as reflected in the goals that he is moving towards, and (2) his perceptions of the relative usefulness of performance on the job as a means of attaining these goals. In this formulation, rewards become the fulfillment of the needs that the individual is moving toward; and effort is determined by the expectations of the individual about the usefulness of performance as a means of goal achievement.

Georgopoulos et al found that "if a worker sees high (or low) productivity as a path to the attainment of one or more of his personal goals in the work situation, he will tend to be a high (or low) producer, assuming that his need is sufficiently high, or goal is relatively salient, and that he is free from barriers to follow the desired path." The results "provide a clear confirmation of the importance of the role of rational aspects in the determination of productivity behavior" (Georgopoulos, Mahoney and Jones, 1957).

The model proposed by Porter and Lawler (1968) is basically

an extension and clarification of the two models sketched above. Porter and Lawler also assume two variables that determine effort: (1) the value of rewards, and (2) the (perceived) probability that rewards depend upon effort. The value of rewards is defined as the attractiveness of possible rewards or outcomes to the individual, with the emphasis on rewards relevant to the needs suggested by Maslow (1943,1954) and modified by Porter (1961). Rewards are valued by the individual to the extent to which he believes that they provide satisfaction of his security, social, esteem, autonomy, and self-actualization needs. The second variable is the individual's subjective estimate of the likelihood that effort on his part will result in his being rewarded by his superior or superiors.

Lawler and Porter (1967) hypothesized that the greater the value of a set of rewards and the higher the probability that receiving each of these rewards depended upon effort, the greater would be the effort that the individual would put forth in a given situation. To test this hypothesis, each reward value was multiplied by the probability that the reward was dependent upon effort. These products were then summed over all rewards for each individual and then checked for their correlation with the effort ratings obtained for the individuals. Although the data tended to support the hypothesis, the results did not reach statistically significant levels.

The above considerations led to the first hypothesis to be tested in this study.

HYPOTHESIS I: High performers will have a higher value of (value of reward) x (probability that effort leads to reward) than will low performers.

Another series of studies (Porter, 1961; Porter, 1964; Porter and Lawler, 1968) examined the relationship of need fulfillment and need satisfaction to the level of performance. The studies found that high performers tended to be more fulfilled and less dissatisfied with respect to their Maslow-type needs (Maslow, 1943; Maslow, 1954) than low performers. In addition, these differences tended to be greater for the higher-order needs than for the lower ones.

Taves, Corwin, and Haas (1963) hypothesized that nurses rated as highly successful (that is, high performers) would be more satisfied with their jobs than low-success nurses (that is, low performers). While the hypothesis was not confirmed when the mean difference in satisfaction scores was considered, the difference was quite strongly in the expected direction.

The second hypothesis in this study then became:

HYPOTHESIS II: High performers will be more fulfilled and less dissatisfied than low performers.

GOALS AND PERFORMANCE

The effort variable mentioned in the preceding models appears to be very closely related to the intention variable discussed by Ryan (1958). Ryan defines intention as what an individual is consciously trying to do. This intention variable is more or less

synonymous with task, desire, goal, want, or wish. If an individual's intention is to be a high performer, then the effort that he exerts toward achieving that objective should also be high.

Ryan's intention variable has been investigated by Locke (1966, 1967, 1968) and by Locke and Bryan (1966, 1967, 1969) in a systematic series of studies. These studies examined the relationship between an individual's goals and his level of performance. They demonstrated that this relationship was not directly affected by differences in satisfaction or rewards. These studies indicated quite clearly that (1) hard goals produced a higher level of performance than did easy goals, (2) specific hard goals produced a higher level of performance than the goal of "do your best", and (3) behavioural intentions regulated choice behaviour. When the effects of intention were partialled out, rewards showed no relationship to performance levels.

All of the above studies were carried out under controlled (laboratory) conditions using such simple tasks as forming words from scrambled letters, adding numbers, or listing objects in a given category. Several different procedures were used to study the relationship between conscious goals or intentions and task performance: (1) goals were assigned by the experimenter before performance and the subjects' acceptance checked later by questioning, (2) subjects were given a limited choice of goals before task performance and asked to choose one of them, and (3) subjects were allowed to set any goals they wished on the task and to indicate their goals after task performance. All three methods yielded significant relationships.

The present study attempted to find out whether these same relationships could be found in a complex work organization. Specifically, the two hypotheses tested were:

HYPOTHESIS III: High performers, as compared to low performers, will perceive the goals set for them by their superior or superiors as being harder.

HYPOTHESIS IV: High performers, as compared to low performers, will perceive their goals as being more specific.

CHAPTER II

METHOD

SETTING AND SUBJECTS

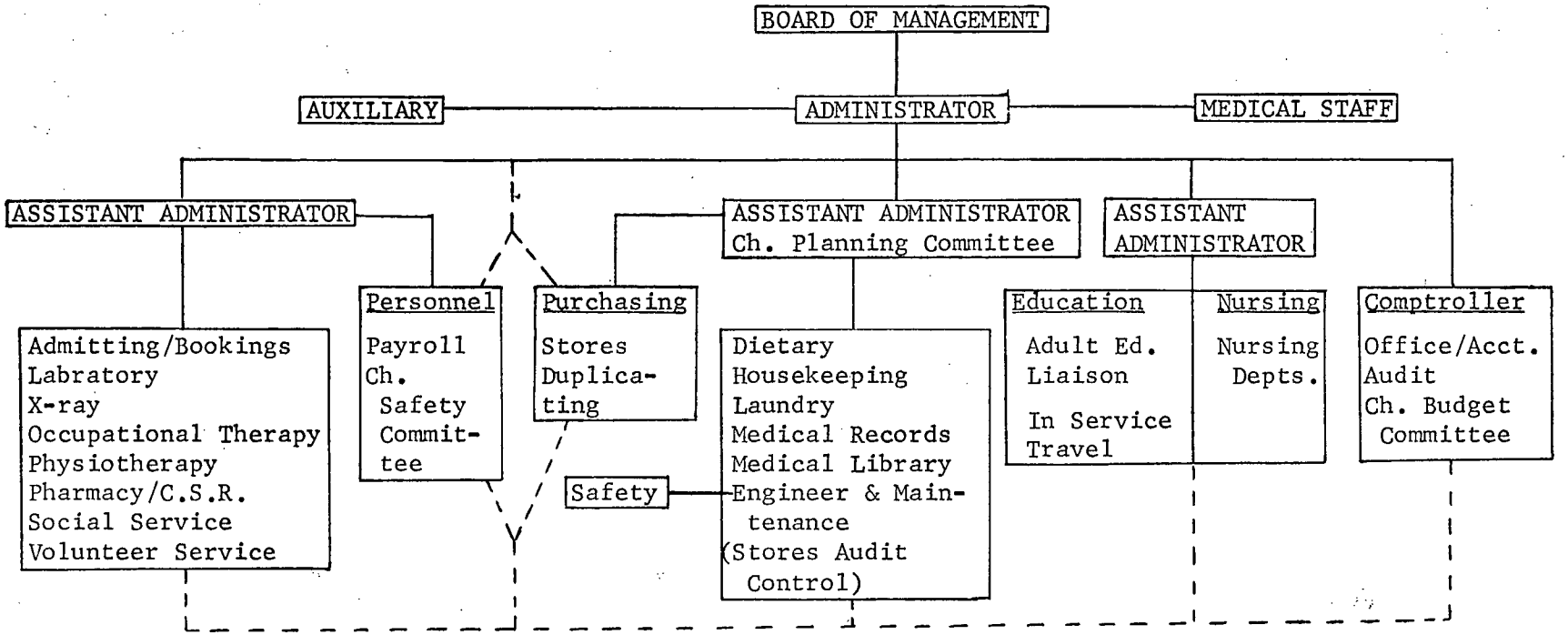
The study was carried out in one of the smaller public hospitals in the metropolitan Vancouver area. The hospital is a fairly typical general hospital, handling all but the most specialized cases. Although the hospital is located in a small municipality, its patients come from all over the metropolitan area.

The various ancillary and administrative departments are organized into several divisions, each the responsibility of an assistant administrator. These assistant administrators report in turn to the hospital administrator, whose position is roughly equivalent to that of a company president. The administrator reports to the board of management, the equivalent of the board of directors of a company. In addition there are three standing committees, the executive, planning, and budget. The formal organizational structure of the hospital is outlined in Figure 1.

The sample used in this study consisted of fifteen department managers and nine nursing supervisors. Nineteen of the subjects had post high school education or training, and only one subject had less than five years experience in hospital work. A more detailed description

FIGURE 1

ORGANIZATION STRUCTURE OF THE HOSPITAL



COMMITTEES:

Executive	Administrator Assistant Administrators Comptroller
Planning	Administrator Assistant Administrators Comptroller Chief Engineer
Budget	Administrator Assistant Administrators Comptroller Purchasing Agent Personnel Manager

of the sample is given in Table I.

TABLE I

CHARACTERISTICS OF SAMPLE

Length of time in present position

0 - ½ yr	4	3 - 5 yrs	4
½ - 1 yr	1	5 - 10 yrs	7
1 - 3 yrs	4	over 10 yrs	4

Total experience in hospital work

0 - 1 yrs	1	10 - 20 yrs	7
1 - 3 yrs	0	20 - 30 yrs	8
3 - 5 yrs	0	over 30 yrs	1
5 - 10 yrs	7		

Total time at this hospital

0 - 1 yrs	2	10 - 20 yrs	5
1 - 3 yrs	4	20 - 30 yrs	0
3 - 5 yrs	2	over 30 yrs	0
5 - 10 yrs	11		

Length of time in a supervisory position

0 - ½ yr	2	3 - 5 yrs	3
½ - 1 yr	1	5 - 10 yrs	7
1 - 3 yrs	4	over 10 yrs	7

Age

20 - 29	3	45 - 49	3
30 - 34	2	50 - 54	6
35 - 39	3	55 - 59	3
40 - 44	4	60 or over	0

Sex

male . . 6 female . . 18

Formal Education

some high school	1
high school degree	4
technical or vocational	7
some university	7
university degree	4
master's degree	1

PERFORMANCE CRITERIA

Since this study was concerned with differences between high performers and low performers, the first problem was to develop a form and criteria for rating the subjects involved in the study. Mahoney

(1967), in a study of managerial perceptions of organizational effectiveness, found seven dimensions most useful for describing performance of organization units. Taking Mahoney's organization unit as consisting of only one individual, his seven dimensions were adapted for use as measures of managerial and supervisory performance.

The seven dimensions used to develop the criteria were:

(1) Development: the degree to which an individual participates in training and educational activities; and the level of the individual's technical skill and competence.

(2) Reliability: the degree to which an individual meets objectives and goals without the necessity of follow-up and checking.

(3) Staffing: the degree of flexibility an individual displays among assignments; and the degree of his development for promotion within the organization.

(4) Planning: the degree to which an individual plans and schedules work operations to avoid lost time, spending a minimum of time on minor crises and "putting out fires".

(5) Co-operation: the degree to which an individual schedules and co-ordinates work operations with other individuals and/or departments, with a minimum number of failures to meet responsibilities.

(6) Performance-support-utilization: the degree of efficient performance, mutual support and respect by an individual of an for his superiors and subordinates, and the individual's utilization of the skills and abilities of his

subordinates.

(7) Initiation: the degree to which an individual initiates improvements in work methods and operations.

The above criteria subsume the three criteria--attitude, initiative, and correctness of procedures and techniques--used by Haas (1964) in his study of hospital personnel. Similar criteria have been used in a number of studies carried out in various, diverse work organizations. For example, Hackman and Porter (1968), in a study of telephone company service representatives, used quality of work, quantity of work, co-operativeness, judgment, dependability, initiative, and ability to learn as their performance criteria.

A later version of Mahoney's questionnaire, made up of 89 items, was used as the basis for developing a rating form for use in the study (see Appendix A). The form which was developed consisted of 21 items covering more or less the seven dimensions described above. Each item was measured on a 1 to 7 (or 7 to 1) scale, with anchor words at either end. For example:

1. Individual participates in training and educational activities.

often 7 6 5 4 3 2 1 seldom

2. Individual drive and ambition for self-advancement is evident.

little 1 2 3 4 5 6 7 much

Each subject in the sample was rated on the 21 items by a panel consisting of his immediate superior and two other top-level supervisors. Each member of the panel rated each individual, so that for any given

subject there were three complete sets of ratings. The panel as such existed in name only, since each rater was instructed to carry out the ratings completely independently of the other two. Each rating form was identified both as to ratee and as to rater. Complete sets of ratings were obtained for all 24 subjects.

The panel which rated the ancillary and administrative department managers consisted of the two assistant administrators responsible for the various departments, and the hospital comptroller. The panel which rated the nursing supervisors consisted of one assistant administrator from the first panel (this particular individual had been at the hospital for many years and hence was fairly well acquainted with the nursing supervisors involved in the study), the assistant administrator responsible for nursing services, and the chief nursing supervisor.

The ratings that were obtained were examined for convergent and discriminant validity (Campbell and Fiske, 1959; Lawler, 1967). Convergent validity was demonstrated by the correlations between the same traits as rated by different raters being significantly different from zero. Discriminant validity was demonstrated by three criteria:

(1) A validity diagonal correlation had to be higher than the values in its column and row in the heterotrait-heterorater triangles. That is, a trait had to correlate more highly with another measure of the same trait than with other variables having neither trait nor rater in common.

(2) A trait measure had to correlate more highly with an

independent effort to measure the same trait than with measures designed to get at different traits which employed the same rater. For a given variable, this meant that its values in the validity diagonal had to be greater than its values in the heterotrait-monorater triangles.

(3) It was desirable for the same pattern of trait interrelationships to be shown in all the heterotrait triangles of both the monorater and the heterorater blocks.

The traits satisfying the conditions for convergent and discriminant validity were used to assign mean performance scores to the subjects. On the basis of these scores the subjects were divided into high performers and low performers. These groups were then used as the bases for the testing of the hypotheses.

NEED FULFILLMENT AND GOAL PERCEPTIONS

While the ratings were being completed, the subjects were given the first of two questionnaires (see Appendix B), which dealt with need fulfillment and goal perceptions. In order to be able to match ratings with returned questionnaires, each of the questionnaires was secretly coded. The questionnaires were distributed to the subjects by their immediate superiors. Each questionnaire was identified by a name slip clipped to it which could be removed by the subject to maintain apparent anonymity. Completed copies of the first questionnaire were received from all 24 subjects.

A week after the first questionnaire had been distributed, a second brief questionnaire (also coded) was given to the subjects (see Appendix C). This questionnaire was identical to the second part of the first questionnaire, except that it reversed the role of the respondent; that is, he became the initiator rather than the receiver. This same questionnaire was also completed by the three assistant administrators. Fourteen department managers and six nursing supervisors returned completed questionnaires.

The first section of the first questionnaire dealt with approximately the same traits as the rating form, but instead of a single seven-point scale, most of the questions had three parts, each with a separate 1 to 7 scale. The first part asked the subjects for their perceptions of how much of a given characteristic or quality there was at present in their supervisory positions. The second part asked the subjects to rank how much of the trait there should be in their positions. The third part asked the subjects how important the item was to them. A typical question was:

1. The training and educational activities provided by the hospital for a person at your level in the organization:

   a. How much is there now?
      min 1 2 3 4 5 6 7 max
   b. Realistically, how much should there be?
      min 1 2 3 4 5 6 7 max
   c. How important is this to you?
      min 1 2 3 4 5 6 7 max

The differences between the values of the first two parts were used as measures of the dissatisfaction of the subjects on that item. The value of the first part was used as a measure of the degree of

of fulfillment of the subjects on an item. The last part was used as a measure of the value or importance of an item to the subjects. The high performers and low performers were then compared with respect to their mean fulfillment and mean dissatisfaction.

At the end of the first section of the first questionnaire, the subjects were asked to rate, on a 1 to 7 scale, the overall quality of their job performance. The last item in the first section asked for the subjects' perceptions of the likelihood of effort on their parts leading to recognition by their superiors.

The second section of the first questionnaire dealt with the subjects' perceptions of various aspects of the goals being set for them by their superiors. Subjects were asked for their perceptions of the degree to which goals, targets, or objectives were presently being set for them by their superiors; the degree to which goals should be set, and the importance of goal-setting to them. Other questions were concerned with the subjects' perceptions of the realism, specificity, and hardness of the average, most difficult, and easiest goals or targets being set for them.

The second questionnaire asked the subjects for their perceptions of various aspects of the goals that they were setting for their own subordinates. They were asked for their perceptions of the degree to which they were presently setting goals, targets, or objectives for their subordinates; the degree to which they should set goals; and the importance of setting these goals. Other questions were concerned with their perceptions of the realism, specificity, and hardness of

the average, most difficult, and easiest goals or targets that they were setting for their subordinates.

STATISTICAL PROCEDURES

All four hypotheses were tested by calculating the coefficient of correlation between the performance ratings and the appropriate values, using a .05 level of confidence as the basis for statistical significance. In addition a t-test of the difference in mean values of the relevant variables between the high performers and the low performers was also performed. Although each hypothesis specified the direction of the difference, it was decided to use a two-tailed test with a .10 level of confidence; that is, it was decided to look for a difference, regardless of direction.

CHAPTER III

RESULTS

Originally it had been planned to treat the department managers and the nursing supervisors as a single sample of supervisory personnel, but very early in the analysis of the data it became apparent that this could not be done without getting very ambiguous results. It was therefore decided to treat the department managers and the nursing supervisors as separate groups for purposes of testing the hypotheses.

PERFORMANCE CRITERIA

Each subject was rated on 21 items by three raters, so that for every individual there were 63 raw scores. Not all 21 items however were used in determining who were the high performers and who were the low performers. The items which were used to segregate the subjects were determined by examining the 21 items rated by the three raters for those which met the conditions for convergent and discriminant validity (Campbell and Fiske, 1959; Lawler, 1967).

The ratings for the department managers were first examined for convergent validity. Only one item was found which correlated significantly across all three raters, but three items were chosen which came closest to satisfying the condition for convergent validity (six

of the nine validity diagonal correlation coefficients were significant at the .05 level of confidence of better). An examination of the reduced correlation matrices--Table II--revealed that if all three raters were used none of the conditions for discriminant validity could be met. If however one rater, rater C, were left out, the items would satisfy all the conditions for both convergent and discriminant validity across the remaining two raters, raters A and B.

TABLE II

CORRELATIONS BETWEEN RATERS FOR DEPARTMENT MANAGERS (N=15)

		Rater A			Rater B			Rater C		
Items		1	2	3	1	2	3	1	2	3
A	1									
	2	33								
	3	-04	18							
B	1	(53)*	10	-45						
	2	15	(76)**	34	09					
	3	-23	24	(61)*	-42	15				
C	1	(62)*	40	07	(40)	-21	-30			
	2	04	(58)*	36	48	(84)**	47	09		
	3	03	37	(25)	06	20	(33)	-42	15	

* $\rho < .05$
** $\rho < .01$

The two raters whose ratings satisfied the conditions for convergent and discriminant validity were the two assistant administrators to whom the various department managers were responsible, whereas the third rater was the hospital comptroller. If the two assistant administrators were considered as "line" and the comptroller as "staff", then it seemed fairly logical to consider only the ratings from the former two, since the individuals being rated were all "line" personnel.

The three items which survived as performance criteria for the department managers were (1) individual drive and ambition for self-advancement, (2) competence and technical skill, and (3) the ability to motivate subordinates.

The performance ratings for the nursing supervisors presented a similar problem. Three trait measures were chosen--Table III--which came closest to satisfying the condition for convergent validity across all three raters (seven of the nine correlation coefficients were significant at the .01 level of confidence or better). Once again, the trait measures failed to satisfy the conditions for discriminant validity when all three raters were considered. Using only raters D and E, the trait measures met (or at least came very close to meeting) all the requirements for convergent and discriminant validity. Raters D and E were the chief nursing supervisor and the assistant administrator for nursing services, respectively. Rater A on the other hand was the same assistant administrator from the panel that rated the department managers, and had no direct connections with the nursing division. So again it appeared logical to exclude the ratings of the

one rater who failed to agree with the other two.

TABLE III

CORRELATIONS BETWEEN RATERS FOR NURSING SUPERVISORS (N=9)

		Rater A			Rater D			Rater E		
Items		1	2	3	1	2	3	1	2	3
A	1									
	2	32								
	3	35	22							
D	1	(76)**	06	-27						
	2	50	(40)	88	-19					
	3	57	07	(89)**	04	80				
E	1	(68)**	26	-24	(90)**	-17	-11			
	2	60	(48)	85	-06	(98)**	76	01		
	3	51	02	(90)**	01	74	(99)**	-13	70	

** $p < .01$

The three trait measures that survived as performance criteria for the nursing supervisors were (1) ability to complete assignments without checking, (2) observing schedules and timetables conscientiously, and (3) getting along well with others.

On the basis of their performance ratings, the department managers were divided into high performers (N=8) and low performers

(N=7). The dichotomization was done by calculating the mean performance score for the department managers as a group (that is, the mean of the 90 raw performance ratings) and then comparing each individual's mean performance score (that is, the mean of the six raw ratings for each subject) with the group mean. If an individual's score was greater than the group mean, he was classified as a high performer; if less, as a low performer. (since the sample was so small, it was impractical to have a group of average performers that could be excluded from the tests of the hypotheses.)

A chi-square analysis was done using the raw performance ratings for each individual (that is, the six item measures for each subject) to determine whether the high and low performers were in fact significantly different (the results are presented in Table IV). The ratings for the department managers ranged from 4 to 7, with a median of 5.55. Ratings of 4 or 5 were classified as low; 6 or 7 as high. The results were significant far beyond the .001 level of confidence. A t-test of the difference in the means between the high and low department managers was also statistically significant ($t = 6.06$, $df = 7$, t-prob. = .001).

The nursing supervisors were similarly divided into high performers (N=5) and low performers (N=4). The results of the chi-square analysis of the nursing supervisors' ratings are given in Table V. The ratings for the nursing supervisors range from 1 to 7 with a median of 6.84. Ratings of 1 through 6 were classified as low; 7, as high. The results of the chi-square were significant at much better than the .001

level. A t-test of the difference in the means also approached significance (t = 4.189, df = 1, t-prob. = .172).

TABLE IV

DEPARTMENT MANAGERS: CHI-SQUARE OF RATINGS

	No. of ratings below median	No. of ratings above median	
Low Performers	29	13	42
High Performers	14	34	48
	43	47	90

median = 5.55

$X^2 = 12.7$ df = 1 sig. at < .001

TABLE V

NURSING SUPERVISORS: CHI-SQUARE OF RATINGS

	No. of ratings below median	No. of ratings above median	
Low Performers	13	11	24
High Performers	0	30	30
	13	41	54

median = 6.84

$X^2 = 18.5$ df = 1 sig. at < .001

VALUE OF REWARD

Hypothesis I was that high performers would have a higher value of (value of reward) x (probability that effort leads to reward) than would low performers. The value of reward here was taken to be the mean of the importance of 12 items from part I of the first questionnaire (see Appendix B). The items chosen (numbers 1 through 10, and 15 and 16) were those which a subject's superior or superiors could more or less directly affect or influence. (The other four items, numbers 11 through 14, dealt with relationships with subordinates.) The value of reward was then multiplied by the subject's perception of the probability of effort on his part leading to reward or recognition by his superior(s). The correlation coefficients of the subjects' mean performance ratings with the (value of reward) x (perceived probability), as well as with the value of reward and perceived probability separately are given in Table VI.

TABLE VI

CORRELATIONS BETWEEN PERFORMANCE RATINGS AND

(value of reward) x (perceived prob.)

	(value) x (prob.)	Value	Perceived Prob.
Department managers	-.62*	-.51*	-.50*
Nursing Supervisors	.78**	.27	.84**

* $\rho < .05$

** $\rho < .01$

While the correlation between performance ratings and (value of reward) x (perceived probability) was statistically significant at better than the .05 level of confidence for the department managers, it was in the opposite direction to that predicted by Hypothesis I. The difference in the mean values between high- and low-rated managers, while not statistically significant, was also quite strongly in the opposite direction to that predicted by the hypothesis; that is, low rated department managers had a higher value for (value of reward) x (perceived probability) than the high-rated department managers.

The responses from the nursing supervisors on the other hand tended to lend some support to Hypothesis I. The correlation between the performance ratings and (value of reward) x (perceived probability) was in the predicted direction and statistically significant at the .01 level of confidence. The difference in the mean values, while not reaching statistical significance, was quite strongly in the predicted direction.

This same marked difference between the department managers and the nursing supervisors was also exhibited when the components were examined separately. For the department managers, performance ratings correlated significantly ($\rho < .05$) and negatively with both the value of reward and the perceived probability. The difference in the means for perceived probabilities was significant (t = 2.06, df = 10, t-prob. = .06), with the low-rated managers having the higher perceived probability of effort leading to reward. The difference in the mean value of reward, while not statistically significant, was also in the same

direction.

The correlations for the nursing supervisors on the other hand were both positive for mean performance ratings with the perceived probability ($\rho < .01$) and the value of reward (n.s.). For both components high-rated nursing supervisors had a greater mean value, although neither difference was statistically significant (the difference in perceived probabilities did however come close).

In summary, the support for Hypothesis I was rather mixed. For both the department managers and the nursing supervisors the correlations of performance ratings with (value of reward) x (perceived probability) were statistically significant, but for the department managers the correlation was not in the expected direction. The differences in the means between high performers and low performers, while not statistically significant for either the department managers or the nursing supervisors, followed the same pattern; that is, the data for the nursing supervisors tended to support the hypothesis, whereas the data for the department managers contradicted the hypothesis quite strongly.

FULFILLMENT AND DISSATISFACTION

The second hypothesis tested was that high performers would be more fulfilled and less dissatisfied than low performers. This hypothesis was tested by examining the correlations between performance ratings and mean fulfillment, and between performance ratings and mean

dissatisfaction. The mean fulfillment was taken as the mean of the 16 part 'a' responses from the first questionnaire; that is, the responses to how much of a given quality or characteristic there was in the respondent's job. The mean dissatisfaction was taken as the mean of the differences between the part 'b' and part 'a' responses; that is, the differences between how much of a quality or characteristic there should be in the job and how much there actually was. The responses to the question dealing with the amount of pressure in the job were negatively scored (that is, the responses were subtracted from 8) to make them more logically equivalent to the other questionnaire items. The correlation coefficients are presented in Table VII.

TABLE VII

CORRELATIONS BETWEEN PERFORMANCE RATINGS AND MEAN FULFILLMENT AND MEAN DISSATISFACTION

	Mean Fulfillment	Mean Dissatisfaction
Department Managers	-.19	-.15
Nursing Supervisors	.37	-.53

For the department managers the correlations between mean performance ratings and mean fulfillment and between mean performance ratings and mean dissatisfaction were both negligible. Although the correlation for mean fulfillment was in the opposite direction to what would be predicted by Hypothesis II (albeit only very weakly), the differences in the means (of mean fulfillment and mean dissatisfaction)

were both in the expected directions; that is, high performers tended to be slightly more fulfilled and less dissatisfied than low performers, although neither of the differences approached statistical significance.

Although the correlations for the nursing supervisors were stronger and both in the predicted directions, neither were statistically significant. The differences in the means were also both in the expected directions, but again neither of them were statistically significant.

The correlation coefficients of performance ratings with fulfillment and dissatisfaction were also calculated for each item for both the department managers and the nursing supervisors (the complete table is in Appendix D). The differences in the means for high performers and low performers were also tested for significance for all items on both fulfillment and dissatisfaction. The results of these analyses provided some support for the second hypothesis.

There were only three items for which the correlations and the differences in fulfillment and dissatisfaction were all in the expected directions for both the department managers and the nursing supervisors. The items were (1) the opportunity to satisfy individual drive and ambition for self-advancement, (2) the respect for one's authority by subordinates, and (3) the team spirit shown by subordinates. For the department managers, the differences in dissatisfaction were significant at the .10 and .07 levels of confidence for the first two items, respectively.

For the department managers, the correlations and the differences in the means for fulfillment and dissatisfaction were in the predicted directions for four items in addition to the three mentioned above. These were (1) the amount of responsibility, (2) freedom in reaching agreements with others, (3) support from subordinates, and (4) respect for one's technical competence. The difference in dissatisfaction on freedom in reaching agreements was significant at the .10 level. For "support from subordinates", the difference in fulfillment between high and low managers was significant at the .03 level, while the difference in dissatisfaction was significant at the .02 level of confidence.

Although the correlations and the differences in the means for the nursing supervisors were in the expected directions for both filfillment and dissatisfaction on nine items, only the three items mentioned previously were the same as for the department managers. The other six items were (1) the training and educational activities provided by the hospital, (2) the frequency of challenging work assignments, (3) absence from pressure, (4) amount of authority, (5) opportunity for implementing new ideas and suggestions, and (6) the soliciting of ideas by superiors. However, none of the differences approached statistical significance.

Since the responses of the department managers and the nursing supervisors appeared to be so dissimilar, it was decided to compare the responses of the two groups with respect to filfillment and dissatisfaction. When the two groups were compared on total fulfillment

and total dissatisfaction, the department managers appeared to be more filfilled and less dissatisfied than the nursing supervisors. The difference in fulfillment was significant ($t = 1.850$, $df = 13$, t-prob. = .08), and the difference in dissatisfaction approached statistical significance ($t = 1.678$, $df = 9$, t-prob. = .125).

When the department managers were compared to the nursing supervisors with respect to their fulfillment and dissatisfaction on the individual items, the department managers were found to be more fulfilled on eleven of the sixteen items. The differences were statistically significant ($\rho < .08$ or better) for six of the eleven, whereas none of the differences on the five items on which the nursing supervisors were slightly more fulfilled were statistically significant. The department managers were also less dissatisfied on thirteen items, with the differences being significant for three of these thirteen ($\rho < .05$ or better). Of the other three items on which the department managers were more dissatisfied only one was statistically significant ($\rho < .02$). The department managers were also less fulfilled on this item, although the difference was not significant.

The items on which the department managers were significantly more fulfilled and significantly less dissatisfied were (1) the training and educational activities provided by the hospital ($\rho < .05$ and $\rho < .03$, respectively), (2) the opportunity for implementing new ideas ($\rho < .02$ for both), and (3) the freedom allowed in reaching agreements with others ($\rho < .07$ and $\rho < .05$, respectively). Although the differences in dissatisfaction were not statistically significant for the following items, the department managers were significantly

more fulfilled with respect to (1) the freedom from pressure ($\rho < .01$), (2) the team spirit shown by subordinates ($\rho < .08$), and (3) the leeway allowed in trying out innovative methods ($\rho < .02$). The nursing supervisors on the other hand were significantly less dissatisfied ($\rho < .02$) and slightly more fulfilled with respect to the amount of responsibility in their positions.

In summary then, Hypothesis II received only very slight support from both the department managers and the nursing supervisors when the total fulfillment and total dissatisfaction were considered. Looking at the fulfillment and dissatisfaction on the individual items, the hypothesis received statistically significant support from both groups on a number of items and slight support on most other items.

GOAL PERCEPTIONS

The third hypothesis in this study was that high performers, as compared to low performers, would perceive the goals set for them by their superior or superiors as being harder. The data (from the second section of the first questionnaire) provided only slight support for this hypothesis. For department managers the correlation between performance ratings and the general hardness of goals was .27 (n.s.), while for the nursing supervisors it was .41 (n.s.). Although both of these correlations were in the predicted direction, neither approached statistical significance. When the hardness of the most difficult goals was considered, the correlations were -.41 (n.s.) and .54 (n.s.) for the department managers and the nursing supervisors,

respectively; for the hardness of the easiest goals, the correlations were -.59 ($\rho < .05$) and .30 (n.s.), respectively.

The differences in the means for the general hardness of goals were in the predicted direction for both the department managers and nursing supervisors, but not statistically significant for either group. The difference in the means for the hardness of the most difficult goals was significant for the department managers ($t = 1.850$, $df = 11$, t-prob. = .09), and indicated that the low-rated department managers saw their hardest goals as being very much more difficult than their average goals than did the high-rated managers. For the nursing supervisors the difference in the means was in the other direction, but not statistically significant. The difference in the means for the hardness of the easiest goals approached statistical significance for the department managers with the low-rated managers having slightly harder easiest goals than the high-rated managers. The low-rated nursing supervisors had easier easiest goals than the high-rated supervisors, with the difference approaching statistical significance.

Hypothesis III then, received some, but not statistically significant, support from both the department managers and the nursing supervisors when the hardness of general or average goals was considered. The data for the most difficult and the easiest goals provided no additional support for the hypothesis.

The final hypothesis to be tested was that high performers, as compared to low performers, would perceive their goals as being more specific. The data provided no support at all for this hypothesis.

The correlations of performance ratings with perceived specificity of goals in general were -.36 (n.s.) and .08 (n.s.) for the department managers and the nursing supervisors, respectively. The differences in the means between the high performers and the low performers, while not statistically significant, were also opposite to the expected direction for both groups. The correlations for the hardest and easiest goals were also negligible for both groups. For the hardest goals, the low performers (department managers or nursing supervisors) tended to see them as being slightly more specific than average than did the high performers, although neither of the differences approached statistical significance. For the easiest goals, the low performers tended to see them as being slightly more specific than did the high performers, although again neither of the differences was statistically significant.

In summary, Hypothesis IV received no support at all from either the department managers or the nursing supervisors. If anything, the data tended to contradict the hypothesis; that is, high performers saw their goals as being less specific than the low performers.

CHAPTER IV

DISCUSSION AND CONCLUSIONS

The results obtained in this study indicate quite clearly that the department managers and the nursing supervisors in this particular hospital have quite different outlooks about their jobs. Part of this difference is no doubt due to the nature of the jobs themselves, but the results suggest that part of the difference may be due to the different organizational micro-climates in which the two groups operate.

That there is a difference in the organizational micro-climates is apparent from the traits that emerge as valid criteria of performance from the convergent and discriminant analysis of the superiors' ratings. For the department managers the emphasis is on drive and ambition, competence and technical skill, and the ability to motivate subordinates. These characteristics are all descriptive of an upper-level managerial, or entrepreneurial climate. In such a climate an individual would be encouraged to get things done by relying on his own initiative, his own knowledge and skills, and his ability to direct others--in short to behave as an entrepreneur. Here the nominal superiors would serve more as co-ordinators than as directors.

For the nursing supervisors on the other hand the emphasis is

on their reliability, their observing of schedules and timetables, and their co-operativeness and ability to get along with others. These traits describe a lower-level supervisory, institutionalized and homogeneous environment. In such an environment there would be more emphasis on carrying out the orders of superiors and on getting along with others--superiors and subordinates. Here there is also a very definite superior-subordinate hierarchy.

The data for the first hypothesis lend further support to the proposition of different micro-climates. It will be recalled that Hypothesis I--high performers will have a higher value of (value of reward) x (perceived probability) than low performers--was quite strongly contradicted for the department managers. Examining the components of the hypothesis (that is, the value of reward and the perceived probability of effort leading to reward) shows quite clearly why the hypothesis was contradicted--both components were correlated significantly and negatively with performance ratings. That is, the more highly an individual was rated, the less he valued the rewards provided by his superiors, and the lower his perceived probability of effort leading to reward.

The value of reward used in testing Hypothesis I was the mean of the rated importances for (1) the training and educational activities provided, (2) the opportunity to satisfy individual drive and ambition, (3) the opportunity to use one's competence and technical skill, (4) the frequency of challenging work assignments, (5) the opportunity for independent action, (6) the amount of pressure,

(7) the amount of authority, (8) the amount of responsibility, (9) the opportunity for implementing new ideas, (10) the amount of freedom in dealing with others, (11) the amount of leeway allowed in trying innovations, and (12) the degree to which superiors solicit one's ideas. All these qualities, except perhaps for numbers (2) and (3), are directly affected by an individual's superiors (and even (2) and (3) are affected to a certain extent).

If the department managers are encouraged to demonstrate entrepreneurial behaviour, then they should value the qualities of their jobs which they see as being tied to such behaviour. But the correlation between value of reward and performance ratings is negative; that is, high-rated department managers value the rewards less. One possible explanation for this could be that once having attained these rewards the value of importance of the rewards is decreased; that is, a satisfied need is no longer a motivator.

But for the nursing supervisors the correlation between performance ratings and the value of reward is strongly positive; that is, for the supervisors, a satisfied need is still a motivator. The resolution of this apparent paradox may be found in the other component of Hypothesis I--the perceived probability of effort leading to recognition. For the department managers the correlation is negative between performance ratings and the perceived probability that effort will lead to recognition, whereas for the nursing supervisors it is positive. The department managers are encouraged to be independent, therefore the high performers see less likelihood of their superiors

providing them with additional rewards, and hence they also value the rewards already attained less (insofar as these are provided by superiors). The nursing supervisors on the other hand see themselves in a definite subordinate role to their superiors and hence they can more readily perceive additional reward as being tied to performance.

The items on which the two groups meet the predictions of the second hypothesis--high performers will be more fulfilled and less dissatisfied than low-rated managers with respect to (1) the amount of responsibility in their jobs, (2) the freedom allowed in reaching agreements with others, (3) the support from their subordinates, and (4) the respect for their technical competence--all qualities descriptive of upper-level managerial positions.

High-rated nursing supervisors on the other hand tend to be more fulfilled and less dissatisfied than low-rated supervisors on (1) the training and educational activities provided by the hospital, (2) the frequency of challenging work assignments, (3) the absence from pressure, (4) the amount of authority in their positions, (5) the opportunity for implementing new ideas, and (6) the soliciting of ideas by their superiors--all items more descriptive of first-line supervisory personnel.

The three items common to both the department managers and the nursing supervisors--the opportunity to satisfy individual drive and ambition, the respect for one's authority by subordinates, and the team spirit shown by subordinates--seem to be more a reflection of the general climate of the hospital as a whole rather than of the

specific micro-climates.

When the department managers and the nursing supervisors are compared with respect to their fulfillment and their dissatisfaction, the managers seem to be overall more fulfilled and less dissatisfied than the nursing supervisors. This is what would be expected on the basis of the micro-climates postulated for the two groups. Most recent studies point towards increased fulfillment and decreased dissatisfaction at higher organizational levels.

The third hypothesis was that high performers would be working toward harder goals than low performers. Considering goals in general, the hypothesis received slight support from both the department managers and the nursing supervisors; that is, the correlations between performance ratings and the hardness of goals were positive, and the mean hardness of goals for the high performers was greater than for the low performers. But when the hardest and the easiest goals were considered, the two groups displayed quite different response patterns.

The correlation between performance ratings and the hardness of the most difficult goals was negative for the department managers, and the low-rated managers also had a significantly higher mean "hardness" value. Since the possible responses ranged from "slightly harder than average" (1) to "very much harder than average" (7), this implies that the high-rated managers are already working toward quite hard goals, and so their hardest goals tend to be only moderately more difficult. For the nursing supervisors however, the high performers tended to see their hardest goals as being much more difficult than did the low

performers.

On the difficulty of the easiest goals the two groups again responded quite differently. The correlation between performance ratings and the hardness of easiest goals was significantly negative for the department managers and the difference in the mean "hardness" values also approached significance. The possible responses in this case ranged from "very much easier than average" (1) to "slightly easier than average" (7). The results they imply that high-rated department managers have fairly hard general goals and that their easiest goals are consequently very much easier than the average. For the nursing supervisors the correlation was positive and the difference in the mean "hardness" values was in the opposite direction to that for the department managers. This seems to imply that high-rated nursing supervisors see their easiest goals as being more difficult than do the low-rated supervisors.

The above results would seem to indicate that high performance for the department managers is associated with perception of a higher overall level of goal difficulty, whereas for the nursing supervisors it is associated with perception of a lower overall level of goal difficulty (as compared to the low performers in each group, respectively).

These differing perceptions are congruent with the differing environments of the two groups. The environment of the department managers encourages drive and ambition, thus leading quite readily to rising perceptions of goal difficulty--hard goals produce high

performance which leads to further encouragement, which in turn causes a further raising of goals, and so on. The nursing supervisors however do not have this feedback mechanism in their environment. For them, once the required goals are met, there is no incentive to raise them, so the goals eventually become easier because of their familiarity.

The data obtained provide no support for the hypothesis that high performers will see their goals as being more specific than low performers. If anything, there is slight support for the converse of the hypothesis--high performers see their goals as being less specific. This lack of specificity in goals may be indicative of the general absence of quantitative economic indices of output in service-oriented organizations such as a hospital.

Although it is always difficult to draw conclusions and form generalizations from the results of any correlational study, it is even more difficult when the sample is so very small as was the case in the present study. The results of this study do, however, seem to form a logically consistent pattern. The results argue very persuasively for the need to take into account the micro-climates of complex work organizations in any attempt to develop criteria, for measuring performance, satisfaction, or whatever. From the findings of this study, it would seem quite inappropriate to apply the same assessment criteria to different groups of the same organization. At best though, this study must be viewed as a pilot project for a much larger study (though not necessarily in a hospital) using improved instruments, rather than as any sort of definitive work.

BIBLIOGRAPHY

Bem, D.J. Self-perception: The dependent variable of human performance, Organizational Behavior and Human Performance, 1967, 2, pp. 105-121.

Berry, N.H., Nelson, P.D., McNally, M.S. A note on supervisor ratings, Personnel Psychology, 1966, 19, pp. 423-426.

Blumberg, H.H., DeSoto, C.B., Kuethe, J.L. Evaluation of rating scale formats, Personnel Psychology, 1966, 19, pp. 243-259.

Brayfield, A. H. and Crockett, W. H. Employee attitudes and employee performance, Psychological Bulletin, 1955, 50, pp. 415-422.

Bryan, J. F., and Locke, E. A. Parkinson's law as a goal-setting phenomenon, Organizational Behavior and Human Performance, 1967, 2, pp. 258-275.

_____. Goal-setting as a means of increasing motivation, Journal of Applied Psychology, 1967, 51, pp. 274-277.

Campbell, D.T. and Fiske, D.W. Convergent and discriminant validation by the multi-trait-multimethod matrix, Psychological Bulletin, 1959, 56, pp. 81-105.

Dunnette, M.D. A note on the criterion, Journal of Applied Psychology, 1963, 47, pp. 251-254.

Fleishman, E.A. Studies in Personnel and Industrial Psychology. Homewood, Ill: Dorsey, 1967.

Galbraith, H., and Cummings, L.L. An empirical investigation of the motivational determinants of task performance: Interactive effects between instrumentality-valence and motivation-ability, Organizational Behavior and Human Performance, 1967, 2, pp. 237-257.

Georgopoulos, Basil S. and Tannenbaum, Arnold S. "A study of organizational effectiveness." Amer. Sociological Rev., 1957, 22, p. 534.

Georgopoulos, B.S., Mahoney, G.M., and Jones, N.W. A path-goal approach to productivity, Journal of Applied Psychology, 1957, 41, pp. 345-353.

Guildford, J.P. Fundamental Statistics in Psychology and Education. (4th ed.) New York: McGraw-Hill, 1965.

Guion, R.M. Personnel Testing. New York: McGraw-Hill, 1965.

Haas, J.E. Role Conception and Group Consensus. Columbia: Ohio State, 1964.

Hackman, J.R. and Porter, L.W. Expectancy theory predictions of work effectiveness, Organizational Behavior and Human Performance, 1968, 3, pp. 417-426.

Hall, D.T. and Nougaim, K.E. An examination of Maslow's need hierarchy in an organizational setting, Organizational Behavior and Human Performance, 1968, 3, pp. 12-35.

Herzberg, F., Mausner, D., and Snyderman, B. The Motivation to Work. New York: Wiley, 1959.

Hughes, E.G., Hughes, H.M. and Deutscher, I. Twenty Thousand Nurses Tell Their Story. Philadelphia: Lippincott, 1958.

Katz D., and Kahn, R. The Social Psychology of Organization. New York: Wiley, 1966.

Krech, David, Crutchfield, R., Ballachey, E. Individual in Society. New York: McGraw-Hill, 1962,

Lawler, E.E. The multitrait-multirater approach to measuring managerial job performance, Journal of Applied Psychology, 1967, 51, p. 369.

Lawler, E.E., and Porter, L.W. Antecedent attitudes of effective managerial performance, Organizational Behavior and Human Performance, 1967, 2, pp. 122-142.

Likert, Rensis. "Measuring organizational performance." Harvard Business Review, Mar.-Apr. 1958, 36, (2), p. 41.

Locke, E. A. The relationship of intentions to level of performance, Journal of Applied Psychology, 1966, 50, pp. 60-66.

_____. The motivational effects of knowledge of results: Knowledge or goal-setting? Journal of Applied Psychology, 1967, 51, pp. 324-329.

_____. Toward a theory of task motivation and incentives, Organizational Behavior and Human Performance, 1968, 3, pp. 157-189.

_____, and Bryan, J.F. Cognitive aspects of psychomotor performance: The effects of performance goals on level of performance, Journal of Applied Psychology, 1966, 50, pp. 286-291.

_____. Performance goals as determinants of level of performance and boredom, Journal of Applied Psychology, 1967, 51, pp. 120-130.

Locke, E. A. and Bryan, J.F. The directing function of goals in task performance, Organizational Behavior and Human Performance, 1969, 4, pp. 35-42.

_____. and Kendall, L.M. Goals and intentions as mediators of the effects of monetary incentives on behavior, Journal of Applied Psychology, 1968, 52, pp. 104-121.

Litwin, G.H., and Stringer, R.A. Motivation and Organizational Climate. Boston: Harvard University, 1968.

McClelland, D.C. The Achieving Society. Princeton, New Jersey: Van Nostrand, 1961.

Mahoney, T.A. Managerial perceptions of organizational effectiveness, Management Science [Application Series], 1967, 14 , p. B-76.

Maier, N.R.F. Psychology in Industry. (3rd edition) Boston: Houghton-Mifflin, 1965.

Maslow, A.H. A theory of human motivation, Psychological Review, 1943, 50, pp. 370-396.

_____. Motivation and Personality. New York: Harper, 1954.

Mitchell, V.F. The relationship of effort, abilities and role perceptions to managerial performance, Unpublished Ph.D. Dissertation.

Nagle, B.F. Criterion development, Personnel Psychology, 1953, 6, pp. 271-289.

Pallett, J.E. and Hoyt, D.P. An empirical approach to criterion specification in general business, Journal of Applied Psychology, 1967, 51, pp. 174-180.

Peters, D. L., and McCormick, E.J. Comparative reliability of numerically anchored vs. job-task anchored rating scales, Journal of Applied Psychology, 1966, 50, p. 92.

Porter, L. W. A study of perceived need satisfactions in bottom and middle management jobs, Journal of Applied Psychology, 1961, 45, pp. 1-10.

Porter, Lyman W. Organizational patterns of managerial job attitudes, American Foundation for Management Research, 1964.

_____. and Lawler, E.E. Managerial Attitudes and Performance. Homewood, Illinois: Irwin, 1968.

Schein, Edgar H. Organizational Psychology. Englewood Cliffs, N.J.: Prentice-Hall, 1965.

Seashore, S.E., Indik, B.P. and Georgopoulos, B.S. Relationships among criteria of job performance, Journal of Applied Psychology, 1960, 44, pp. 195-202.

Siegel, Sidney. Nonparametric Statistics. New York: McGraw-Hill, 1956.

Smith, P.C. and Cranny, C. J. Psychology of men at work, Annual Review of Psychology, 1968, 19, pp. 467-496.

Strauss, George. Human relations--1968 style, Industrial Relations, 1968, 7 (3), p. 262.

Tannenbaum, A. Social Psychology of the Work Organization. Belmont, California: Wadsworth, 1966.

Taves, M.J., Corwin, R.G. and Haas, J.E. Role Conception and Vocational Success and Satisfaction. Columbus: Ohio State University, 1963.

Thorndike, R.L. Personnel Selection: Test and Measurement Technique. New York: Wiley, 1949.

Vroom, Victor H. Work and Motivation. New York: Wiley, 1964.

_____. Motivation in management, American Foundation for Management Research, 1965.

_____. A comparison of static and dynamic correlational methods in the study of organizations, Organizational Behavior and Human Performance, 1966, 1, pp. 55-70.

A P P E N D I X

A P P E N D I X A

RATING FORM

INSTRUCTIONS

Please rate, on separate forms, all the individuals on the list given to you. At the top of the first page of each form, please print the name of the individual being rated.

Please do not discuss these ratings with other members of the panel.

Each item is to be rated on a scale from 1 to 7. If the individual is described almost exactly by the word at the low (high) end of the scale for an item, circle the number 1 (7). If the individual is not quite described by the anchor word, circle the number 2 (6), and so on. If the individual is neutral with respect to an item (i.e., neither anchor word is more, or less, descriptive), circle the number 4.

Read each item carefully and be sure that you know which way the scale is arranged.

PLEASE DO NOT OMIT ANY ITEMS

NAME OF INDIVIDUAL BEING RATED _____ code _____

1. Individual participates in training and educational activities.
often 7 6 5 4 3 2 1 seldom

2. Individual drive and ambition for self-advancement is evident.
little 1 2 3 4 5 6 7 much

3. Competence and technical skill of the individual.
high 7 6 5 4 3 2 1 low

4. Individual is usually challenged by work assignments.
much 7 6 5 4 3 2 1 little

5. Individual can be relied upon to complete assignments without checking.
seldom 1 2 3 4 5 6 7 usually

6. Amount of follow-through, pressure, or coercion needed to insure that directives are carried out and goals are met.
much 1 2 3 4 5 6 7 little

7. Time lost and wasted through the individual's indecision.
much 1 2 3 4 5 6 7 little

8. Time and effort wasted by the individual's incorrect estimates of what the job requires.
seldom 7 6 5 4 3 2 1 often

9. The individual co-ordinates scheduled work operations with others.
rarely 1 2 3 4 5 6 7 usually

10. Schedules and timetables are conscientiously observed.
usually 7 6 5 4 3 2 1 rarely

11. Problems are bucked up the line for solution.
rarely 7 6 5 4 3 2 1 usually

12. Overall efficiency of the individual.
low 1 2 3 4 5 6 7 high

13. Quality of output or performance.
high 7 6 5 4 3 2 1 low

14. Efficiency in the use of available resources.
low 1 2 3 4 5 6 7 high

15. Performs near or at level of capacity.
usually 7 6 5 4 3 2 1 rarely

16. Initiates improvements in work methods, operations, and procedures.
often 7 6 5 4 3 2 1 seldom

17. Takes calculated risks in trying innovative methods and approaches.
rarely 1 2 3 4 5 6 7 often

18. Gets involved in conflicts with others over responsibilities.
often 1 2 3 4 5 6 7 rarely

19. Overstates and exaggerates his accomplishments.
usually 1 2 3 4 5 6 7 rarely

20. Criticized by others as uncooperative and a source of trouble.
rarely 7 6 5 4 3 2 1 often

21. Able to motivate subordinates.
usually 7 6 5 4 3 2 1 seldom

A P P E N D I X B

NEEDS QUESTIONNAIRE

INTRODUCTION AND GENERAL INSTRUCTIONS

This questionnaire is part of a study of hospital personnel and how they view certain aspects of their jobs. This is not a study of individuals. We are interested in how you view your particular job in the hospital and various related aspects of that job.

On the following pages you will find a series of questions. Each question in some way concerns how you view various aspects of your job. There are no "trick" questions, and we think you will find this questionnaire both stimulating and interesting. All that we ask is that you try to answer as honestly and candidly as possible.

It goes without saying that under no circumstances will your individual responses be disclosed. Completed questionnaires will be centrally machine-processed for use in the study.

In advance, we wish to thank you for your participation in this study.

PART I

INSTRUCTIONS

The following is a list of characteristics or qualities connected with your present job. For each characteristic, you are asked to give three ratings:

a. How much of the characteristic is there now connected with your current job?

b. Realistically, how much of the characteristic do you think should be connected with your current job?

c. How important is this job characteristic to you?

Each rating is on a seven-point scale like this:

minimum 1 2 3 4 5 6 7 maximum

Please circle the number on that scale which represents the amount of the characteristic being rated. Low numbers represent low or minimum amounts, and high numbers represent high or maximum amounts. If you think there is "very little" or none of the characteristic, circle the number 1, If you think there is "just a little", circle the number 2, and so on. If you think there is "a great deal, but not a maximum amount", circle the number 6. On each scale, circle only one number.

PLEASE DO NOT OMIT ANY SCALES

1. The training and educational activities provided by the hospital for a person at your level in the organization:
   a. How much is there now? min 1 2 3 4 5 6 7 max
   b. Realistically, how much should there be? min 1 2 3 4 5 6 7 max
   c. How important is this to you? min 1 2 3 4 5 6 7 max

2. The opportunity in your supervisory position to satisfy your individual drive and ambition for self-advancement:
   a. How much is there now? min 1 2 3 4 5 6 7 max
   b. Realistically, how much should there be? min 1 2 3 4 5 6 7 max
   c. How important is this to you? min 1 2 3 4 5 6 7 max

3. The opportunity to use your competence and technical skill in your supervisory position:
   a. How much is there now? min 1 2 3 4 5 6 7 max
   b. Realistically, how much should there be? min 1 2 3 4 5 6 7 max
   c. How important is this to you? min 1 2 3 4 5 6 7 max

4. The frequency of challenging work assignments in your supervisory position:
   a. How frequent are they now? min 1 2 3 4 5 6 7 max
   b. Realistically, how frequent should they be? min 1 2 3 4 5 6 7 max
   c. How important is this to you? min 1 2 3 4 5 6 7 max

5. The opportunity for independent action in your supervisory position:
   a. How much is there now? min 1 2 3 4 5 6 7 max
   b. Realistically, how much should there be? min 1 2 3 4 5 6 7 max
   c. How important is this to you? min 1 2 3 4 5 6 7 max

6. The pressure, checking, control, or coercion exerted on you by your superior(s):
   a. How much is there now? min 1 2 3 4 5 6 7 max
   b. Realistically, how much should there be? min 1 2 3 4 5 6 7 max
   c. How important is this to you? min 1 2 3 4 5 6 7 max

7. The authority you have in your supervisory position:
   a. How much is there now? min 1 2 3 4 5 6 7 max
   b. Realistically, how much should there be? min 1 2 3 4 5 6 7 max
   c. How important is this to you? min 1 2 3 4 5 6 7 max

8. The responsibility you have in your supervisory position:
   a. How much is there now? min 1 2 3 4 5 6 7 max
   b. Realistically, how much should there be? min 1 2 3 4 5 6 7 max
   c. How important is this to you? min 1 2 3 4 5 6 7 max

9. The opportunity in your supervisory position for implementing new ideas and suggestions:
   a. How much is there now? min 1 2 3 4 5 6 7 max
   b. Realistically, how much should there be? min 1 2 3 4 5 6 7 max
   c. How important is this to you? min 1 2 3 4 5 6 7 max

10. The freedom or autonomy you are allowed in reaching agreements with others at your level:
    a. How much is there now? min 1 2 3 4 5 6 7 max
    b. Realistically, how much should there be? min 1 2 3 4 5 6 7 max
    c. How important is this to you? min 1 2 3 4 5 6 7 max

11. The support your direct subordinates give to you:
    a. How much is there now? min 1 2 3 4 5 6 7 max
    b. Realistically, how much should there be? min 1 2 3 4 5 6 7 max
    c. How important is this to you? min 1 2 3 4 5 6 7 max

12. The respect by your subordinates for your technical competence:
    a. How much is there now? min 1 2 3 4 5 6 7 max
    b. Realistically, how much should there be? min 1 2 3 4 5 6 7 max
    c. How important is this to you? min 1 2 3 4 5 6 7 max

13. The respect for your authority by your direct subordinates:
    a. How much is there now? min 1 2 3 4 5 6 7 max
    b. Realistically, how much should there be? min 1 2 3 4 5 6 7 max
    c. How important is this to you? min 1 2 3 4 5 6 7 max

14. The "esprit de corps" and team spirit shown by your direct subordinates:
    a. How much is there now? min 1 2 3 4 5 6 7 max
    b. Realistically, how much should there be? min 1 2 3 4 5 6 7 max
    c. How important is this to you? min 1 2 3 4 5 6 7 max

15. The leeway you are allowed in trying out innovative methods and approaches:
    a. How much is there now? min 1 2 3 4 5 6 7 max
    b. Realistically, how much should there be? min 1 2 3 4 5 6 7 max
    c. How important is this to you? min 1 2 3 4 5 6 7 max

16. The degree to which your superior(s) solicit your ideas, suggestions, or proposals for change:
    a. How much is there now? min 1 2 3 4 5 6 7 max
    b. Realistically, how much should there be? min 1 2 3 4 5 6 7 max
    c. How important is this to you? min 1 2 3 4 5 6 7 max

17. The overall quality of your job performance:
    low 1 2 3 4 5 6 7 high

18. The likelihood that effort on your part will lead to recognition by your superior(s):
    low 1 2 3 4 5 6 7 high

PART II

INSTRUCTIONS

The following questions deal with the setting of goals, targets, or objectives for you by your superior(s).

the first few questions deal with goals in general (i.e., the average goal or objective). The second group of questions deals with the most difficult goals set for you. The final group deals with the easiest goals set for you.

Each rating is on a seven-point scale. Please circle the number on that scale which represents the amount of the quality being rated. If the item is described almost exactly by the word or phrase at the low end of the scale, circle the number 1. If the item is not quite described by the anchor word or phrase at the low end, circle the number 2, and so on. If the item is described almost exactly by the word or phrase at the high end of the scale, circle and number 7, and so on. If the item is neutral with respect to the words or phrases, circle the number 4.

PLEASE DO NOT OMIT ANY SCALES

1. The degree to which goals, targets, or objectives are set for you by your superior(s):
   a. How much is there now? min 1 2 3 4 5 6 7 max
   b. Realistically, how much should there be? min 1 2 3 4 5 6 7 max
   c. How important is this to you? min 1 2 3 4 5 6 7 max

2. The general realism or attainability of these goals:
   quite unrealistic 1 2 3 4 5 6 7 quite realistic

3. The overall specificity of these goals (i.e., as opposed to being told to "do your best"):
   quite general or broad 1 2 3 4 5 6 7 quite specific of definite

4. The general hardness or difficulty of these goals (i.e., the amount of challenge they provide for you):
   quite easy 1 2 3 4 5 6 7 quite difficult

5. The realism or attainability of the <u>most difficult</u> or challenging goals set for you by your superior(s):
   less realistic than average 1 2 3 4 5 6 7 more realistic than average

6. The specificity of the most difficult goals:
   less specific than average 1 2 3 4 5 6 7 more specific than average

7. The hardness or difficulty of the most difficult goals:
   slightly harder than average 1 2 3 4 5 6 7 very much harder than average

8. The realism of attainability of the <u>easiest</u> goals set for you by your superior(s):
   less realistic than average 1 2 3 4 5 6 7 more realistic than average

9. The specificity of the easiest goals:
   less specific than average 1 2 3 4 5 6 7 more specific than average

10. The hardness or difficulty of the easiest goals:
    very much easier than average 1 2 3 4 5 6 7 slightly easier than average

NOTE: To assist us in the statistical analysis of the data, we require the following information. (Please answer all questions).

1. Present department in hospital (check one):

___ Finance/Accounting
___ Public Relations
___ General Administration
___ Admitting/Booking
___ Pharmacy/C.S.R.
___ Social Service
___ X-Ray
___ Medical Library/Records
___ Nursing
___ Other (please specify)
___ Personnel
___ Education
___ Engineering/Maintenance
___ Occupational Therapy
___ Physiotherapy
___ Volunteer Service
___ Dietary
___ Purchasing/Stores
___ Planning
___ Laboratory
___ Laundry/Housekeeping

2. How many levels of supervision are there above your position?
___ (give number)

3. How many subordinates do you have reporting directly to you? (check one)

___ 1 - 10
___ 11 - 20
___ 21 - 30
___ 31 - 40
___ 41 - 50
___ 51 - 60
___ 61 - 70
___ 71 - 80
___ 81 - 90
___ over 90 (give number)

4. Length of time in present position (check one):

___ 0 - ½ year
___ ½ - 1 year
___ 1 - 3 years
___ 3 - 5 years
___ 5 - 10 years
___ over 10 years

5. Total experience in hospital work (check one):

___ 0 - 1 year
___ 1 - 3 years
___ 3 - 5 years
___ 5 - 10 years
___ 10 - 20 years
___ 20 - 30 years
___ over 30 years

6. Total time at this hospital (check one):

___ 0 - 1 year
___ 1 - 3 years
___ 3 - 5 years
___ 5 - 10 years
___ 10 - 20 years
___ 20 - 30 years
___ over 30 years

7. Length of time in a supervisory position (check one):

___ 0 - ½ year
___ ½ - 1 year
___ 1 - 3 years
___ 3 - 5 years
___ 5 - 10 years
___ over 10 years

A P P E N D I X C

GOAL QUESTIONNAIRE

1. The degree to which you set goals, targets, or objectives for your direct subordinates:
   a. How much is there now? min 1 2 3 4 5 6 7 max
   b. Realistically, how much should there be? min 1 2 3 4 5 6 7 max
   c. How important is this to you? min 1 2 3 4 5 6 7 max

2. The general realism or attainability of these goals:
   quite unrealistic 1 2 3 4 5 6 7 quite realistic

3. The overall specificity of these goals (i.e., as opposed to telling your subordinates to "do their best"):
   quite general or broad 1 2 3 4 5 6 7 quite specific or definite

4. The general hardness of these goals (i.e., the amount of challenge they provide for your subordinates):
   quite easy 1 2 3 4 5 6 7 quite difficult

5. The realism or attainability of the <u>most difficult</u> or challenging goals you set for your subordinates:
   less realistic than average 1 2 3 4 5 6 7 more realistic than average

6. The specificity of the most difficult goals:
   less specific than average 1 2 3 4 5 6 7 more specific than average

7. The hardness or difficulty of the most difficult goals:
   slightly harder than average 1 2 3 4 5 6 7 very much harder than average

8. The realism or attainability of the <u>easiest</u> goals you set for your subordinates:
   less realistic than average 1 2 3 4 5 6 7 more realistic than average

9. The specificity of the easiest goals:
   less specific than average 1 2 3 4 5 6 7 more specific than average

10. The hardness or difficulty of the easiest goals:
    very much easier than average 1 2 3 4 5 6 7 slightly easier than average

A P P E N D I X D

CORRELATION COEFFICIENTS FOR PERFORMANCE RATINGS WITH FULFILLMENTS AND DISSATISFACTIONS BY ITEMS

	Department Managers		Nursing Supervisors	
Item	Fulfillment	Dissatisfaction	Fulfillment	Dissatisfaction
1	-.32	-.20	-.34	-.54
2	.25	-.43	.70*	-.88**
3	-.37	.22	-.02	-.42
4	-.32	-.44	.73*	-.85**
5	-.41	-.05	.24	-.10
6	-.07	.57*	.77**	-.57
7	-.14	.08	.38	-.37
8	.20	-.27	-.05	-.40
9	-.14	.22	.56	-.64
10	-.15	-.32	.03	-.10
11	.31	-.60*	-.28	.33
12	.06	-.30	-.70*	.39
13	.06	-.35	.14	-.43
14	.10	-.32	-.13	-.14
15	-.25	.12	-.21	.47
16	-.41	.26	.23	-.23

* $\rho < .05$

** $\rho < .01$