FOLLOW UP STUDY OF 132 ADULT PATIENTS CONCERNING THE EMERGENCY DEPARTMENT CARE THEY RECEIVED AT FOUR METROPOLITAN HOSPITALS

by

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A THESIS

Presented to
the University of Oregon School of Nursing
and the Graduate Council
of the University of Oregon Medical School
in partial fulfillment
of the requirements for the degree of
Master of Science

June 12, 1969

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This study was undertaken with the financial assistance of a United States Public Health Traineeship, Grant Number NT-35-C11.

ACKNOWLEDGMENTS

The writer wishes to express her appreciation to Miss Lucile Gregerson, Associate Professor under whose guidance and encouragement this study was prepared. The writer is also appreciative of Dr. Steven G. Goldstein's direction regarding the statistical analysis.

A special thanks is due to computer programmer Mr. Fred Weatherly who not only gave considerable time and effort to running the data through the IBM computer, but also to explaining the fundamentals of electronic data processing to the writer.

A very personal thanks to a patient and understanding family, to my sons Billy and Johnny, to my daughters Emily, Lola, and Stephanie, and to a loving husband Bill for his many sacrifices, encouragement and understanding. To him I will be forever grateful.

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CHAPTER I

INTRODUCTION

Introduction to the Problem

The responsibilities of the emergency room nurse are really not very different from the responsibilities of other professional nurses. The emergency room nurse must identify the needs of the patient and expedite the patient's care, utilizing her own special skills to maintain a consistently high standard of care. In addition, she must on occasion, like other professional nurses, teach new personnel and exercise her nursing judgment in the delegation of nursing functions. Yet, it is also true that the emergency room nurse perhaps needs the special faculty of being able to react quickly, professionally, and constantly to all types of emergencies being presented to her, whereas other professional nurses are faced with emergency situations only occasionally. Emergency units in almost all major hospitals are, everyday, handling emergencies of all types as a matter of routine. Each such emergency that arrives in an emergency unit is evaluated, treated and either released or transferred to another department in the hospital.

The changing of the old emergency room into a separate and

distinct unit of the hospital is a relatively new and modern development. Only a few years ago the emergency room was exactly that--a room for emergencies that was incidentally staffed when and if it was needed using whatever staff happened to be available. During the last 17 years there has been a change, with the emergency room being expanded into a distinct emergency unit of the hospital. (7, 16) This has occurred by reason of necessity. The public has demanded that complete, modern and easily available emergency facilities be provided, and there has been a tremendous increase in the utilization of such emergency room facilities throughout the county during these past 17 years. (16, 27)

The great increase in the use of emergency room facilities has caused many problems. Additional hospital beds to match the rise in emergency admissions were needed as were building additions to the hospital itself. Radiology and laboratory facilities have been strained by the increased work loads, and the number of professional employees required to provide care for the increased number of patients has also risen. (27)

> A lag periodically occurs between increased demand for service and the ability to provide it. In the case of the emergency room, such a lag is likely to be particularly disastrous because of the reduced efficiency of the patient care and the subsequent (justifiable) criticism of the institution of the whole. Perhaps in no other area of hospital operation is the interface between the hospital and the public so thin. Prolonged waiting, delays in obtaining

> roentgenograms, or just the impression that another patient has been improperly treated is likely to create a poor image. Realizing that the voluntary hospitals in this country up to the present time have been largely dependent upon the good will of the public for many phases of their funding, we feel it is particularly important for hospital administration to correctly interpret changing trends in order to reduce the periodic "lag phases" to a minimum. (17)

The patient's impression of emergency care is extremely important because it is taken home, discussed, and passed on to others. Many more patients are treated in emergency departments than are actually admitted to the hospitals. In New York City alone more than two million patients are seen in these units annually. When this is projected nationally the dramatic figure in utilization attests that these emergency facilities are among the most potent of public relations instruments. (32)

There are several modern trends that are affecting the emergency department function including the following:

1. Less than half of the cases presented to the emergency department are true emergencies, more than half are medical, pediatric and obstetric problems. (7)
2. Emergency department patients come from all walks of life--from the indigent to the very wealthy and from the aged to the very young. (7)
3. Students of the emergency department scene predict a 6 to

10% annual increase in visits and by 1972 it is predicted that hospitals will be providing eight units of ambulatory care to every inpatient admission. (7, 17)

4. The public has developed the attitude that the emergency department is the community medical center where anyone may apply, with any kind of complaint, at any hour of the day or night, and expect prompt and courteous consideration and attention. (7, 32, 17)

The tremendous increase in the use of emergency departments--the United States Public Health Service has projected an increasing use of hospitals for the decade 1960-1970 per 1,000 population of 8% in hospital admissions, 18% in outpatient visits and 79% in emergency department volume (57) -- poses difficult problems for hospital public relations. A person who enters an emergency department, day or night, understandably demands quality emergency care. This need to provide quality emergency care gives hospitals reasons to re-examine their emergency departments.

In the American Medical Association's handbook entitled Emergency Department it is stated that,

> An emergency department can do more toward developing goodwill for the hospital than any other single department. On the other hand, it can produce more ill will and unfavorable comments than any other hospital service. (16)

What are the attitudes and opinions of members of the public who have actually been treated in the emergency departments? It is those attitudes and opinions which this study has attempted to elicit and examine.

Statement of the Problem

The problem presented is that of determining whether the public feels satisfied with the emergency care given at the present time. Specifically, do patients, who have been treated in emergency departments, feel satisfied with the emergency care received? What factors enter into their feelings of satisfaction or lack of satisfaction of emergency care? It is the patients' perception of care that is reported in this study which has been directed toward identifying the attitudes of previously treated patients toward emergency room care.

Purpose of the Study

The purposes of the study were:

1. to identify the over-all attitude of the out-patient, previously treated in an emergency department, regarding the care received;
2. to determine if there is a relationship between this over-all attitude and his specific feelings regarding his being physically comfortable under the circumstances, his being

given confidence at the time of his treatment, the service being performed in a skillful manner, the nurse being sympathetic, the communications being sufficient, the service being prompt, and the record keeping being handled well.

3. to determine if there is any significant difference in the expressed feelings of the out-patients of each of four different hospitals, when the patients are divided into four groups according to the hospital in which they received their treatment, and the feelings of each of the groups are compared.

Hypotheses

The following hypotheses are tested in the study:

1. The over-all reaction of out-patients who have been treated in the emergency rooms of four metropolitan hospitals is not that of general satisfaction with the care received.
2. None of the following factors bears a significant relationship on the out-patient's over-all reaction to his emergency care:
   a. The patient's feelings regarding physical comfort under the circumstances.

b. The patient's feelings as to whether or not he was given a sense of confidence.

c. The patient's feelings as to whether or not the service was performed in a skillful manner.

d. The patient's feelings as to whether or not the nurse was sympathetic.

e. The patient's feelings as to whether or not there was sufficient communication.

f. The patient's feelings as to whether or not the service was prompt.

g. The patient's feelings as to whether or not the record-keeping was handled well.

3. There is no significant difference between the responses of patients of each of the four different hospitals, when the feelings of the patients of each of the four hospitals are compared, as to their over-all reaction regarding their emergency care.

Limitations

For the purpose of this study the following limitations were made:

1. The study was confined to a descriptive reporting of the feelings and reactions of patients to emergency room care

previously received by them, and no effort was made to define what is proper care, what are proper physical facilities, what is proper communication, what is skillful service, what is prompt service, or what is good record keeping. It is only what the patient expressed about these factors that was considered important in this study.

2. The study was limited to a selected group, namely persons who have been treated in the emergency department of one of four selected hospitals in the metropolitan area of Portland, Oregon.
3. The data were obtained by means of a mailed questionnaire dealing with the services rendered in the emergency department.
4. The participants were limited to those who were 21 years or older in age and were selected from those who entered the emergency department during a seven day week in the summer of 1968 until a random sample of 50 adults had been taken from the roster of each hospital. All respondents were chosen from the same week from each of the four metropolitan hospitals that participated in the study. The participants were limited to 50 from each hospital, selected from the admittance sheet of each hospital, a total of 200 participants.

5. Only adult patients who had been treated in the emergency unit and then discharged from the hospital, rather than being transferred to another department of the hospital, or admitted to the hospital, were used in the study.

Assumptions

Patients who enter the emergency departments of hospitals are generally people requiring diagnosis, treatment or both, and this is often sufficient to arouse in them considerable anxiety. It is against this background that the feelings of the emergency room patient were viewed and these assumptions were made:

1. Patients have feelings, opinions and attitudes regarding the emergency care they received.
2. These feelings or attitudes are measurable. The use of the anonymous mailed reply will obtain a relatively accurate divulging of the patients' feelings and attitudes. (23)

Definitions

Attitude: presently, there is no definition of an "attitude" which is accepted by everyone. Most of the definitions refer to interactions between an individual and his environment. Thurstone stated that "the concept 'attitude' will be used to denote the sum total of a man's inclinations and feelings, prejudices or bias,

preconceived notions, ideas, fears, threats, and convictions about any specific topic." (72) Gordon Allport in Handbook of Social Psychology defines attitude as "a disposition common to individuals but possessed to different degrees, which impels them to react to objects, situations or propositions in ways that can be called favorable or unfavorable." (4)

Attitude scale: a device used to sample opinion through the use of a group of statements which have been assembled in a prescribed manner and which represent all possible shades of belief or opinion about particular issues in question. (12) To assess the patients' attitudes, a horizontal rating scale instrument employing dichotomous extremes was utilized.

Emergency department: a combination hospital-physician facility which provides immediate care for ambulatory patients as well as for the critically ill and injured. (16)

Measurement of attitude: a method that defines the relationship of persons to one another in relation to a given variable by the use of numbers.

Opinion: a verbal expression of an attitude, or as Thurstone states, an opinion "symbolizes an attitude." (72)

Outpatient: one receiving treatment at a hospital without being an inmate. (69)

Justification of the Study

More and more people are making use of the emergency units of hospitals. Many hospital officials are dissatisfied with their emergency care service because there is evidence that the need for emergency service has grown more rapidly than the ability to provide for it. (77) This has resulted, in some cases, in patients not being fully satisfied with the emergency care that has been provided. It is important for nurses to find out to what extent patients are presently satisfied with emergency care, and what factors make for this satisfaction or lack of it. It has been said that more persons actually trained in traumatology are needed to staff emergency rooms. (27) While it is realized that the findings of this study will in no way be considered conclusive, it is hoped that the findings will give some important clues to what patients feel are significant in achieving satisfactory emergency care.

Design of the Study

Sources of Data

The primary sources of data were the replies obtained from 132 participating outpatients of four metropolitan hospitals.

The secondary sources of data were obtained from a review of the literature and related studies.

Procedure

The steps whereby this study was developed may be described as follows:

1. Relevant literature and related studies were reviewed to locate references concerning emergency room care and reactions of patients to such care and to establish a frame of reference pertinent to the stated problem and the measurement of attitudes.
2. Unstructured conferences with the Directors of Nursing of four metropolitan hospitals were arranged to ascertain the nature and scope of emergency room service at the present time. Those with whom conferences were held were:
   a. Miss Dorothy Davy, Director of Nursing Service, Good Samaritan Hospital and Medical Center, Portland, Oregon.
   b. Mrs. Ruth Wiens, Director of Nursing, St. Vincent Hospital, Portland, Oregon.
   c. Miss Esther Jacobson, Director of Nursing Service, Emanuel Hospital, Portland, Oregon.
   d. Mrs. Doretta Grinna, Director of Nurses, Providence Hospital, Portland, Oregon.
3. A statement of the problem was formulated.

4. The problem was delimited and reduced to writing in the form of a proposal including therein the statement of the problem, its importance and the procedures for its solution.
5. A data collection tool was devised in the form of a questionnaire which would elicit the information needed to complete the study.
6. The questionnaire and proposal were submitted to each of the administrators or Directors of Nursing of the four metropolitan hospitals involved in the study for their approval. The administrators or Directors of Nursing to whom the questionnaire and proposal were sent were:
   a. Mr. James Sauer, Jr., Providence Hospital, Portland, Oregon.
   b. Mrs. Ruth Wiens, St. Vincent Hospital, Portland, Oregon.
   c. Mr. Walter Bain, Emanuel Hospital, Portland, Oregon.
   d. Miss Dorothy Davy, Good Samaritan Hospital and Medical Center, Portland, Oregon.
7. A pilot study involving 50 out-patients who had previously been treated in the emergency room of the Multnomah County Hospital was carried out.
8. The data collecting tool was tested for its reliability.

9. The names of the 50 participants from each of the four hospitals which had agreed to participate in the study were obtained.
10. The questionnaire was mailed together with a cover letter from the investigator explaining the study and seeking the participation of each of those selected. A stamped, addressed envelope for return was included.
11. The findings were tabulated by numbering the questionnaires with a key to the master sheet. The master sheet was presented to computer programer Mr. Fred Weatherly who ran the data through an IBM 1401 computer to facilitate the cross-correlation matrix.
12. The tables were constructed and the study was described and interpreted.
13. The study was summarized, conclusions drawn and recommendations made for further study.

Overview of the Study

This study has been organized into four chapters:

Chapter I introduces the broad problem, the statement of the problem, purpose of the study, hypotheses, limitations, assumptions, justification and design of the study.

Chapter II consists of a review of the pertinent nursing and

social science literature and studies related to the topic.

Chapter III is a report of the study, the plan for and statistical analysis of the data and interpretations of the findings.

Chapter IV contains the summary, conclusions and recommendations for further study.

CHAPTER II

SURVEY OF RELATED LITERATURE AND STUDIES

Introduction

The emergency department of a hospital is extremely important to the development of goodwill for the hospital. This chapter will review some of the studies that have stressed this fact. The chapter will also include some of the factors that have been considered important in developing feelings or attitudes in patients.

Attitude measurement will also be explored. The research that has been conducted in the study of attitude measurement is centered primarily in the behavioral sciences. This chapter will review some of the most important findings of the contributing disciplines and will examine some of the successful measuring devices which have been developed by the behavioral scientists.

Patient Reaction to Emergency Department Care

The modern hospital, in its efforts to care for the sick and the injured, is becoming increasingly complex. This is due to the many changes that have evolved in the continuing effort to meet the demands of modern medicine and to the social and economic pressures

that are altering the health team's concepts of hospital function. This has created new attitudes and expectations in the public. In no field have these factors been more influential than in the emergency department. (5)

The emergency department requires the involvement of so many individuals and so many services that there is presented an infinite variety of administrative, procedural, and professional problems. The handling of these problems will not only affect the efficiency of the service but also the reputation of the hospital and the confidence and satisfaction of the public. (48)

The emergency department has relationships with many individuals and agencies outside the hospital including public officials and agencies, public information media, and the general public. Stable and satisfactory relationships throughout the community are essential for the hospital's effectiveness as a community institution. The American Hospital Association's publication Emergency Services in the Hospital states:

> To promote good public relations, a brochure that briefly describes the emergency department--its functions, rules that affect the public, and charges and the reasons for them--is valuable. If such a brochure is given to each patient and visitor many misunderstandings can be avoided. (5)

Such a brochure could contribute significantly to the patient's overall satisfaction of care.

Dr. Richard F. Manegold in "Emergency Facilities and Services" presents some very interesting statistics and information relating to the use of emergency departments by the public. In one hospital 8% of the patients seen were admitted for trauma; in another, 68%. In one suburban institution, 2% of the patients seen were complaining of flu and cold; in another, 12%. At the Yale-New Haven Hospital, 57% of the patients seen in the emergency department were considered to be non-urgent. In a Chicago hospital 56% of the patients were considered to be non-urgent. In a Midwest city of 200, 000, 47% of the emergency room admissions were non-urgent. (7) The statistics point out the extent to which the public uses these facilities on a non-emergency basis.

Robert M. Sigmond states:

> By its nature, emergency medical service is episodic and impersonal; emergency service inherently lacks the basic characteristics of ideal ongoing health services; continuity and an ongoing patient-physician relationship. But, also, by its very nature, emergency medical services must be extremely accessible and convenient to the public.
>
> All evidence suggests that the public's use of emergency resources for non-urgent needs does not reflect a preference for episodic, impersonal care. Rather, it reflects the shortage of community physicians, the barrier of tightly scheduled physician office hours and the inaccessibility of private physician service at the convenience of the public. The public has been making choices and will continue to do so. (7)

Manegold points out that the quality of inpatient care and that of emergency and outpatient care is generally unrelated. Still the impression the public has is of the total hospital.

Facilities and equipment represent one aspect of the problem. In a survey of 72 general hospitals in Colorado it was found that 23 were lacking adequate equipment, necessary medication, airways, tracheostomy tubes, positive pressure breathing apparatus, defibrillators, and suction machines; and 18 were considered too small or too antiquated to offer emergency medical care. (7)

Delays of any sort are also found distressing. In one Chicago hospital, the door to the emergency department is locked at night and the ambulance attendants or patients have to ring a doorbell and wait for the night supervisor to open the door. There are also frequent delays in having a patient seen. Sometimes when the patient is seen his treatment is further delayed while a lengthy history is taken. In short, says Manegold, "some hospitals have failed to adequately plan for the services they provide on one hand, and to define their community responsibility on the other." (7)

Leo Feldman writes in the Modern Hospital that

> No aspect of a hospital's operations can create more community relations problems than its emergency department. Both the handling of news of an emergency case which has attracted press interest and the handling of the patient himself can have considerable impact on a hospital's community relations. (31)

In Feldman's study the three major public relations objectives of all medical institutions are listed as being: 1. the enhancing of the patient's confidence in the hospital and the minimizing of his anxiety about being hospitalized; 2. the conveying of the image that your hospital is a prestigious place to work to facilitate the recruitment of first-rate professional, paramedical and administrative personnel; and 3. the maintaining of the confidence and respect of the public to ensure its continual support. Feldman points out that when patients are dissatisfied with a hospital's emergency department that it seems the public is predisposed to readily accept the proposition that there is something wrong at the hospital. Feldman says that hospitals have fallen down in properly educating the public on the proper role of the emergency room. (7, 31)

There is a need for all hospitals to do more to educate the public in the proper role and function of the emergency department. Feldman, who is the director of the department of community relations at Michael Reese Hospital and Medical Center in Chicago, says that a program of education should be undertaken before the situations arise by preparing a pamphlet for distribution to each patient who comes in for treatment. Many hospitals have such publications, and they go a long way in reducing misunderstandings and avoiding unpleasant incidents.

Dr. J. Cuthbert Owens in Survey Discovers What is Wrong

with Emergency Service states:

> The nurse is obviously a vital person in the emergency service. Her decisions must be rapid, she must be able to screen patients, and she must possess knowledge not only of how to assist in all types of emergency care, but also how to deal with human beings under stress. The survey found that indoctrination of nursing personnel was woefully lacking in the majority of hospital emergency units. (54)

The treatment of an acute emergency is unique in medicine because, not only must the medical team perform competently and efficiently, but under considerable tension and stress.

> The very urgency of the situation, together with the fear and anxiety which pervade it, make it essential for the physician to assume a role of calm and controlled leadership. In order to perform this role successfully he must, even while engaged in lifesaving maneuvers, communicate confidence and competence not only to his colleagues and assistants, but also to the patient and his relations. (54)

In all cases, according to Ballinger, Rutherford and Zuidema in the Management of Trauma, it is important for the doctor to tell the patient what he is going to do and how he is going to do it.

> Comments made by the physician such as "the hair will grow back", "I'm doing this to prevent infection", "We'll numb the area so it won't hurt" may be expected to relieve anxiety and will result in increased cooperation on the part of most patients. (10)

The nurse must recognize that she is dealing with vast numbers of people and their behavior in times of stress. Windermuth says that it is essential that she possess knowledge and understanding of

human behavior and human relationships and that she have the ability to establish constructive, purposeful interpersonal relationships. The department "needs--in fact, it demands--professional personnel who possess a sincere interest in, a sympathetic understanding of, and a genuine liking for people." (79)

Elizabeth W. Hard points out that to the majority of patients the hospital experience is especially trying and often terrifying. She says that the spirit of the hospital is dependent on the nurses who have direct contact with the patients.

> Their attitude may determine the respect or dislike of the public for the hospital. The nurse, no matter how busy, who can give a pleasant greeting, instead of a baleful glare, inspires confidence. Every hospital needs the good will of the community. (38)

Dr. Eldred states that stress--psychological stress--is always part of a hospital's context. A new patient coming into any hospital in this country is unwittingly behaving or misbehaving along culturally determined patterns. He is, according to Dr. Eldred, expected to be dependent upon the nurse and to surrender a great deal of his personal freedom. How the nurse communicates to the patient is extremely important to the impression the patient will take home of the hospital. Interpersonal communication goes on in three different ways at the same time, says Dr. Eldred: language, kinesics, and vocalizations, all going on within a context. Kinesics

means the totality of body set, rhythm, and movement of a non-rhythmical nature. Vocalizations refers to the noises, pauses, and alternations in pitch and degree of loudness which are generally lumped under the heading "tone of voice." This total interpersonal communication is important to whether or not the patient leaves the emergency department with an attitude of satisfaction or a feeling of dissatisfaction.

"Communicating under stress is difficult", says Eldred. The tone of voice may be harsh, rapid, loud and peremptory. It is almost automatic for one to respond defensively or at best negatively to this kind of communication. In so doing, the patient may be deprived of the very kind of interpersonal transaction that is needed to relieve stress. Eldred emphasizes that this point becomes particularly poignant when we realize that such a patient may not have the foggiest notion that he is communicating in an offensive fashion. Yet it is this patient who, upon leaving the emergency department, will take his feelings of satisfaction or dissatisfaction out into the community. (29)

A Cleveland study, reported by Abdellah, said that three things contributed to dissatisfaction. In this study of three Cleveland hospitals, a sample of 100 patients and all nursing and medical personnel were asked to participate in the study. From the patient's point of view, these were the three things contributing to his

dissatisfaction: 1. insufficient time to explain treatment to the patient; 2. insufficient thought to patient and family needs; and 3. insufficient time with patient. (1)

The literature reported on revealed several factors which are considered significant in the formulation of feelings or attitudes regarding departments. These factors include the actual physical facilities of the emergency department, the skillfulness of the personnel, the promptness of the service, and the communication with the patient including the explanation of the reasons for the treatment, sympathy for his difficulties and expressions of confidence that everything will be all right. (1, 3, 10, 18, 20, 36, 60)

The emergency department has been described as the "crossroads of the hospital." Scenes of human drama are enacted there every day and few people ever imagine or can possible envision the range of human experience that takes place in the emergency department. The emergency department is all this, and more, for it is also an open window to the hospital. And although the public may only see one small aspect of what happens, the entire institution is often judged by what is seen and what is heard through that window. (31)

Attitudes and Attitude Research

John E. Horrocks in Assessment of Behavior states than an important and determining aspect of any person's behavior involves the attitudes he has developed. An individual's present status cannot be examined, nor can one estimate the direction of his future behavior without making an assessment of his attitudes. Tests of attitudes are usually considered separately as representative of major classifications of the areas of measurement along with achievement, aptitudes, personality and intelligence. (41)

Tests of attitudes are at least in part tests of personality in that they may measure to some extent those verbalized aspects of an individual which are important in governing his behavior and his reaction to his environment. An attitude, according to Horrocks, is an expression of an individual's reaction toward feeling about a person, a thing, or a situation. It represents the subjective total of his fears, his inclinations, his wishes, his prejudices and his preconceived notions and convictions. An attitude may be thought of as an expression of a particular person's values. It may be said that attitudes result from the impact of present and past environment and are learned rather than inherited. The problem in the measurement of attitudes is that they may not be measured directly, but are typically measured by having an examinee express or react to

opinion, choose between contrasting statements or react overtly when presented with various other standard test situations. An examiner, in using attitude measures must be aware that verbal and other overt expressions of an attitude are not infallible indicators of the actual existence of that attitude in the person being measured. (28, 59, 65, 68, 73)

Among the approaches to attitude measurement may be listed observation interviews, specific performances, pictorial techniques, sociometry, analysis of personal documents, and questionnaires. But it is the questionnaire, in one or more of its various forms, that is most likely to be used by the average investigator who wishes to make an attitude measurement.

Observations involve standard reports systematically gathered by trained recorders and sometimes supplemented by recordings or motion pictures. The interview extends from a list of simple questions which may be answered yes or no to a much more complex series of open-ended questions, but the difficulty here is that the examiner may exert too much influence over the person being interviewed. Specific performances of a person such as his actually giving of his time and effort to a cause provide relatively valid measures of attitudes. A study of the actual racial discrimination of apartment house owners would be an example of the specific performance approach to the assessment of attitudes. Pictorial

techniques are used to measure attitudes by asking examinees to rank photographs in order of preference or asking them to identify pictures with themselves. This was the approach used in the school segregation cases in 1954 when Professor Clark testified in the South Carolina, Delaware, and Virginia litigations as follows:

> A. I made these tests on Thursday and Friday of this past week at your request, and I presented it to negro children in the Scott's Branch Elementary School, concentrating particularly on the elementary group. I used these methods which I told you about--the Negro and White dolls--which were identical in every respect save skin color. And I presented them with a sheet of paper on which there were these drawings of dolls, and I asked them to show me the doll - May I read from these notes?
>
> Judge Waring: You may refresh your recollection.
>
> A. Thank you. I presented these dolls to them and I asked them the following questions in the following order: "Show me the doll that you like best or that you'd like to play with," "Show me the doll that is the 'nice' doll," "Show me the doll that looks 'bad'" and then the following questions also: "Give me the doll that looks like a white child," "Give me the doll that looks like a colored child," "Give me the doll that looks like a Negro child," and "Give me the doll that looks like you."
>
> Q. Like you?
>
> A. "Like you." That was the final question, and you can see why. I wanted to get the child's free expression of his opinions and feelings before I had him identified with one of these two dolls. I found that of the children between the ages of six and nine whom I tested, which were a total of sixteen in number, that ten of those children chose the white doll as their preference; the doll which they liked best. Ten of them also considered the white doll a

> "nice" doll. And, I think you have to keep in mind that these two dolls were absolutely identical in every respect except skin color. Eleven of these sixteen children chose the brown doll as the doll which looked "bad". This is consistent with previous results which we have obtained testing over three hundred children, and we interpret it to mean that the Negro child accepts as early as six, seven or eight the negative stereotypes about his own group. It may also interest you to know that only one of these children, between six and nine, dared to choose the white doll as looking bad. . . .
>
> Q. Well, as a result of your tests, what conclusions have you reached, Mr. Clark, with respect to the infant plantiffs involved in this case?
>
> A. The conclusion which I was forced to reach was that these children in Clarendon County, like other human beings who are subjected to an obviously inferior status in the society in which they live, have been definitely harmed in the development of their personalities; that the signs of instability in their personalities are clear, and I think that every psychologist would accept and interpret these signs as such. (14)

Sociometric techniques have also been used to study racial and other attitudes. Children were asked, for instance, in non-segregated classes to select the two members of their classes next to whom they would most like to sit. In another study in the American Southwest, Spanish and English-speaking high-schoolers were asked to write lists of the children they customarily played with while in school and lists of those with whom they played at home and on holidays. This was a study of ethnic attitudes. (41)

The analysis of personal documents uses writings and other

personal productions of individuals as a means of assessing their attitudes. Public documents may be analyzed in a similar manner in the study of group and national attitudes. (41)

The questionnaire technique has served as the main instrument for the collection of research data on attitudes. Six different types of questionnaires commonly used in the assessment of attitudes have been identified. These are 1. preference, 2. stereotype, 3. situational, 4. social distance, 5. opinion, and 6. self-rating. The preference type of questionnaire is usually cast in rating, or rank-order, or paired-comparison form to measure relative acceptability and indicates whether an examinee's attitudes are more or less favorable to each of the alternatives proposed in the various questions. The stereotype questionnaire gives the examinee the choice of a number of possible stereotypes he feels are descriptive of various groups, persons, things, or events. The situational questionnaire presents the examinee with one or more hypothetical situations and asks him to choose from several alternatives the course of action he feels most advisable to take in dealing with the supposed situation. The social-distance questionnaire lists various degrees of social relationship and asks the examinee to indicate which of the various social relationships he would find acceptable in dealing with various ethnic, racial, religious or other kinds of groups. Among the relationships posed by Bogardus were: 1. kinship through marriage,

2. membership in a social club, 3. neighbors, 4. employment in the same occupation, 5. citizenship in the same country, 6. tourist in the country of the respondent, and 7. exclusion from the examinee's country. The opinion questionnaire asks the respondent to agree or disagree to each item in a list of statements believed by the examiner to represent different attitudes. Finally, self rating questionnaires require the examinee to make statements or choices about his own feelings rather than with regard to supposedly objective statements. (41, 65, 72)

Attitude Measuring Instruments

Attitude measuring instruments have become increasingly sophisticated over the past few decades. One of the first forms of attitudinal measures was the public opinion poll first appearing in the 1930's and still very apparent in the Gallup and Roper polls of today. These polls are used to assess the attitude of a representative sampling on a particular issue or candidate. The assumption is that the "opinion" expressed is an accurate reflection of the respondent's attitude. This is a questionable assumption. The problem, according to Sherif, is that is is nearly impossible to draw a representative sample because there can be no assurance that the sample will accurately reflect the many numbers of existing and informal "groups." (65)

The first direct means of investigating attitudes was developed by E. S. Bogardus in 1925 in order to measure "social distance" between racial groups. Bogardus had 100 judges rank 60 statements and then, after analyzing the rankings, reduced the list to seven equally distant statements.

> The principal strength of the Bogardus social distance scale is its ease of usage and speed of construction. The major difficulty centers around the development of equally distant attitude statements to which subjects will respond freely and accurately.
>
> The most promising application of social distance scales would be in the area of behavioral studies dealing with questions of interpersonal relationships. (49)

In 1928 L. L. Thurstone introduced his method of measuring a subject's attitudes by employing the method of equal appearing intervals to the subject's expressed opinions. Thurstone generally started with more than 100 opinion statements which were submitted to a group of several hundred people who were asked to arrange the statements into 11 classifications beginning with the first classification, "strongly favorable", continuing to the sixth classification, designated as "neutral" and through the eleventh classification, which was "extremely unfavorable". The results were tabulated and scale values ranging from 0.0, one extreme, to 11.0 at the other extreme were computed for the 20 to 30 most consistent opinions. These statements, upon which the greatest agreement among the

judges was found, were retained in the scale. Other individual attitudes could then be compared with this scale. (72) Manning points out that it is not only time-consuming and expensive to construct a Thurstone scale but may be inaccurate because the judges may interject their own attitudes in the sorting process or not take proper care in separating the opinions into the classifications. (49)

Rensis Likert developed the first "summated rating scales" in 1932, and, as in the Thurstone method, began with the collection of a large number of statements relating to the particular attitude in question. Here, however, the respondents select the one choice from five presented that best represents their attitude. In other words, the edited items are given to a group of subjects who respond on a 5-point continuum (strongly agree, agree, undecided, disagree, strongly disagree). For purposes of scoring the items are weighted either 1-2-3-4-5 or 5-4-3-2-1. For half the statements the continua are reversed. This type of rating scale shows both the direction and the intensity of the attitude of the examinee. (59)

Further problems and methods of scale construction have been discussed by H. H. Remmers, Louis Guttman, Allen L. Edwards and others, (41, 49, 65) and in 1952 Charles E. Osgood proposed a technique which he called the "semantic differential." (53) This technique involves a set of seven-point scales terminating in bipolar adjectives such as good-bad. According to Osgood, it involves:

> (a) the use of factor analysis to determine the number and nature of factors entering into semantic descriptions of judgment, and (b) the selection of a set of specific scales corresponding to these factors which can be standardized as a measure of meaning. Using this differential, the meaning of a particular concept to a particular individual can be specified quantitatively as a particular point in the multi-dimensional space defined by the instrument. (53)

The advantage of this scale is in its much greater simplicity and in the ease with which it can be applied yielding at the same time an indication of both the direction of a person's attitude and the intensity of feeling.

A variation of the Osgood scale was developed by D. James Manning in a "Market Profile Scale," a device for measuring consumer attitudes. Manning used this scale to ask 24 attitudinal questions of 500 respondents in the Greater Seattle area in May of 1965. (49)

Related Studies

The literature revealed only three studies dealing with opinions and attitudes of individuals regarding the emergency department of a hospital. In 1962 Maxine Blome investigated the expressed opinions of families of patients who had had treatment in an emergency department. The specific objective of the study was:

> To identify expressions of satisfaction versus dissatisfaction in order to determine (a) how well

> the department was meeting the needs of those who accompanied a patient and (b) what factors should be improved.

The study was developed by means of interviews conducted in the homes of 50 families who accompanied patients to the emergency department. The technique used was a combination of the check list and open-ended schedule with a semi-structured interview. The check list required only the checking or the writing in of a word while providing additional space for remarks as the interviewer wishes to make them. In the interview pre-determined questions were used with a degree of freedom so as to adapt them to the particular situation. The open-ended schedule or questionnaire allowed for freedom of response. The findings of this study indicated that 93% of the people interviewed had been informed of the patient's progress and were given an opportunity to ask questions; it followed that some individuals were dissatisfied because there was a lack of communication. Some also indicated dissatisfaction with the services because of the delays that occurred before the services were rendered. (13)

For the most part, the findings of Blome's study indicated a high degree of satisfaction expressed by the participants. However, Blome herself recognized that data collected by an interview schedule are apt to be skewed toward positive responses. She also stated that "it is quite possible that the tool lacked sensitivity and that the

interview was too superficial." She suggested that a similar study should be made using patients instead of relatives.

In 1964 Ruth A. Cook made a study entitled A Generalized Description of the Behaviors of Forty Individuals Admitted to a Hospital Emergency Room. The purpose of this study was to observe the behavior of individuals who had been admitted to a hospital emergency room. In this study an observation guide was constructed and reviewed by 23 registered professional nurses, including three from the emergency department. Fifteen guidelines for observation were selected which were limited to those observations which could be made without the patient becoming unduly aware of the presence of the observer and without physical contact. The findings of the study indicated that some persons become stimulated under such circumstances and are not able to tolerate actions which might not disturb them under other circumstances. (19)

Additional observations of patients showed that 35% of the patients remained quiet during the time they were in the emergency treatment; 20% were continually restless. Motions, facial expressions, eye directions, skin appearances, and vocalizations were all observed indicating that being a patient in the emergency department of a hospital is especially trying and sometimes even terrifying. The study points out the need for the nurse to be aware of the nature of behavioral incidents as a background for her judgments about patient

care. Cook recommended that a follow-up study of patients treated in the emergency room be made by mailing questionnaires to determine if instruction received in the emergency room was adequate.

An Exploratory Survey of Patient Satisfaction with Emergency Room Treatment was undertaken in 1964 by Mrs. Georgina Crater et al. at St. Vincent's Hospital, Portland, Oregon, to investigate two specific areas: 1. the improvement of the patient satisfaction questionnaire distributed by the hospital to all patients admitted, and 2. the functioning of the emergency department. The method used was the interview conducted in such a way as to obtain information on six general areas:

1. the location, facilities and atmosphere of the waiting room;
2. the patients' attitudes toward the presence or absence of other patients in the emergency department environment;
3. the patients' impression of the medical treatment they received;
4. whether or not it would be beneficial to have a priest or some other religious personnel in the emergency department when the patient arrived;
5. if the presence of religious personnel is thought to be advantageous, what would be perceived as the major role of such persons;
6. any compliments, complaints, or recommendations.

In addition to the interview, each subject was asked to complete a supplementary rating scale consisting of three questions: 1. In general, your treatment from the time you entered the emergency room was; 2. While you were in the emergency room do you feel that your religious needs were met; 3. Do you feel that you were given enough information about what was going to be done to you. The subject was to rate the questions on a continuum from "very unsatisfactory" to "very satisfactory" or from "not at all" to "very well" depending on the nature of the question. The findings of the study indicated that all subjects verbally reported their treatment as very satisfactory though some had difficulty in utilizing the rating scale. Twenty-seven patients, 91%, stated that they had been given sufficient information. All 30 patients interviewed were very satisfied with the medical treatment received though there were isolated complaints about the amount of time required before medical treatment was completed. The study points out, however, that there was a possibility that patients failed to voice their true feelings in the situation. This was fortified by the fact that in the study the staff of the hospital felt quite dissatisfied with several aspects of the emergency care procedure at the hospital. (22)

Summary of the Reviewed Literature and Related Studies

Promoting good public relations is extremely important to every hospital. The operation of the emergency department of a hospital reflects upon the operations of the entire hospital and provides the public with an open window to the hospital. The literature emphasized that satisfaction of the public with the operations of the emergency room department is required to maintain the confidence and respect of the public. Factors important to expressed feelings of satisfaction or dissatisfaction include the actual physical facilities of the emergency department, the skillfulness of the personnel, the promptness of the service, and the communication with the patient.

The measurement of satisfaction or dissatisfaction is the measurement of attitudes. Approaches to attitude measurement include observation interviews, specific performances, pictorial techniques, sociometry, analysis of personal documents, and questionnaires. The questionnaire technique has become increasingly sophisticated, developing into a self-rating continuum scale.

CHAPTER III

REPORT OF THE STUDY

Introduction

This study was undertaken for the purpose of investigating the attitudes of outpatients regarding the emergency department care previously received by them in one of four metropolitan hospitals and to analyze and correlate certain specific factors that affect the over-all attitude or reaction of these outpatients. The factorial analysis permits the evaluation of interaction effects; i. e., the effects attributable to the combination of variables above and beyond that which can be predicted from the variables considered singly. (74, 80).

First of all, the following hypothesis was tested: the over-all reaction of outpatients who have been treated in the emergency departments of four metropolitan hospitals is that of general dissatisfaction with the care received. Then, a factorial analysis was made testing the following hypothesis that none of the following factors had any significant relationship on the outpatient's over-all reaction to his care: 1. his feelings as to his physical comfort, 2. his feelings as to whether or not he was given confidence, 3. his feelings as to

whether or not the service was performed skillfully, 4. his feelings as to whether or not there was sufficient communication, 5. his feelings as to whether or not the nurse was sympathetic, 6. his feelings as to whether or not the service was prompt, and 7. his feelings as to whether or not the record-keeping was handled well. A final hypothesis was tested that there is no significant difference between the patients of each of the four hospitals, when the feelings of the patients of each of the four hospitals are compared, as to their over-all reaction regarding their emergency care.

The steps of the study, the limitations, the assumptions and the hypotheses were all stated in Chapter I and have been the defining propositions of this study.

Selection of the Data Collecting Instrument

Following a review of the literature, it was decided that the Manning scale should be selected for this study. The scale was the outgrowth of the previous works of Louis Guttman and Ward H. Goodenough as further developed by Charles E. Osgood. (53)

A sample Manning question and the instructions preceding the question illustrate the measuring device employed:

> IMPORTANT: Please read these instructions carefully.
>
> For each of the items below, mark a vertical line / at that point on the line between the two extremes which

best represents your attitude, opinion or feeling.

A mark in the center of the line indicates no preference at all. The nearer either extreme you mark is an indication of the strength of your preference. Please complete the rest of this questionnaire.

33. To what extent are you satisfied with the quality of the fryers you have purchased recently?

Absolutely Dissatisfied _____|_____ Completely Satisfied

Manning explains that when the nouns "opinion, or feeling" were included with "attitude", confusion over the meaning of "attitude" was reduced. Manning also points out that it was by design that the first sentence of the paragraph reads, "A mark in the center of the line indicates no preference at all."

> Strong concern has been expressed that the respondents tend to mark toward the extremes; consequently, the center, or neutral, classifications are often understated. Stating the criteria for the neutral position in this prominent manner was an attempt to minimize this condition. (49)

Manning also says that a major advantage of his rating scale is that, like the Osgood scale, it allows for a two-dimensional measurement and both the direction and the intensity of the respondent's reactions to the questions may be recorded. The respondent is given only three semantic reference points: the two extremes and the neutral position and other than the vertical lines at the ends of the scale, the scale itself is void of any reference points. The avoidance of reference marks on the scale itself was, in the words

of Manning, because:

> It appears presumptuous to assume that a respondent could accurately reduce and quantify his "opinion or attitude" to either a numerical value or a meaningful gradation between "absolutely dissatisfied" and "generally dissatisfied." In the absence of these gradations and/or numerical values, respondents individually, hence collectively, will distribute their answers in a meaningful pattern. (49)

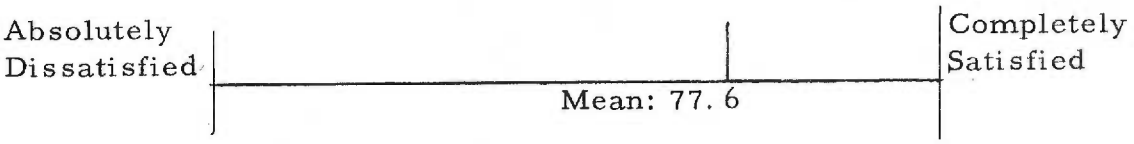
Manning further explains that if a meaningful aggregate profile can be obtained by employing three clearly understood reference points--absolutely dissatisfied, no preference, and completely satisfied--a wider and more practical application for the device can be found than by attempting to construct a 25-point Thurstone equally-appearing interval scale, or a 5-point Likert summated rating scale. The horizontal scale line is ten centimeters long and converts readily into ten equal scalar intervals which allows for a 20% neutral range and four gradations to each extreme. Reporting on the sample question from Manning's study presents three possibilities: 1. tabular form; 2. median value; and 3. in a histogram as follows:

First, tabular form:

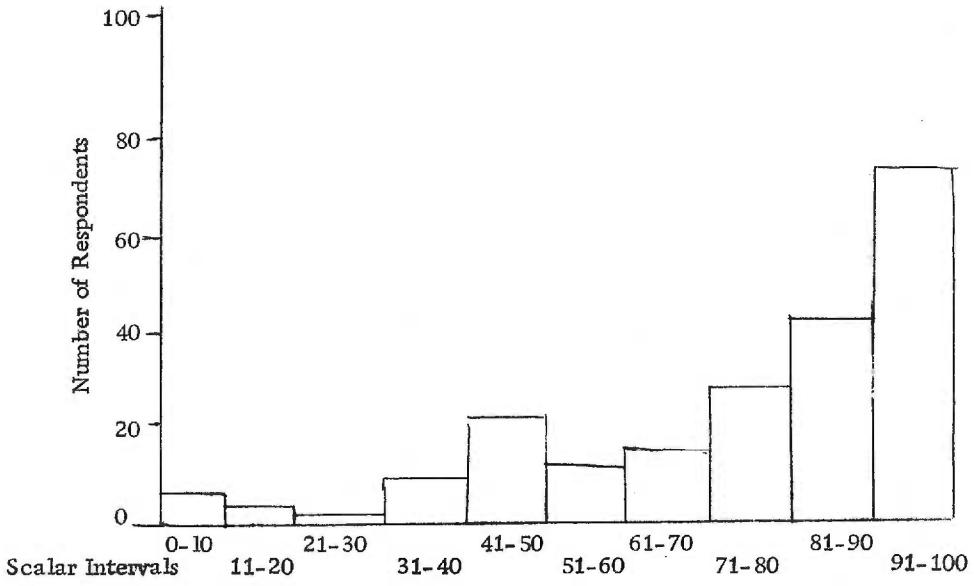
To what extent are you satisfied with the quality of the fryers you have purchased recently?

Scalar interval	Range of Attitudes	Number	% of Total	% of Respondents
0-10	Absolutely dissatisfied	13	2.6	2.6
11-20	↓	8	1.6	1.6
21-30		6	1.2	1.2
31-40		14	2.8	2.8
41-50	Neutral	42	8.4	8.5
51-60	Neutral	17	3.4	3.4
61-70		25	5.0	5.1
71-80	↓	55	11.0	11.1
81-90		92	18.4	18.6
91-100	Completely satisfied	223	44.6	45.1
No response		5	1.0	--
	Total	500	100.0	100.0

Second, reporting the mean value:



And third, in a histogram:



The Manning Scale was adopted in this study because: 1. it employs a scale, 2. the scale is a continuum, 3. it is a self-rating instrument and 4. the results obtained are appropriate for statistical analysis.

The Manning scale, like the Osgood scale, allows for a two-dimensional measurement and both the direction and the intensity of the respondent's reactions to the questions can be recorded. A major problem retarding the use and development of attitudinal measures in the past has centered around the development of scale reference points; for example, Guttman's use of 300 judges to determine the equal-appearing intervals, and similar techniques employed both by Likert and Osgood. Manning eliminates this as being "time consuming and expensive" and provides only three semantic reference points, a neutral zone in the middle and satisfaction or dissatisfaction at either end.

> A mark in the center of the line indicates no preference at all. The nearer either extreme the mark is made is an indication of the strength of preference.

(49)

Since the basic question of this study is one of satisfaction versus dissatisfaction, the Manning scale seemed particularly appropriate. The scale can then conveniently be subdivided into ten classes after it has been used and this allows for a 20% neutral range and four

gradations to each extreme so that intensity of feeling can be measured. The Manning scale was well validated in his study as was its reliability. Permission to use the scale was granted by Dr. Manning. (See correspondence, Appendix A)

The scale then had to be adapted to the subject matter of this study, and this was accomplished by devising a questionnaire using the scale for measuring satisfaction of emergency department care and specifically treating relevant factors entering into the feelings of satisfaction or dissatisfaction. The literature reviewed revealed several factors considered significant in the formulation of feelings or attitudes regarding emergency departments. These factors include the actual physical facilities of the emergency department, the skillfulness of the personnel, the promptness of the service, the communication with the patient including the communication of the reasons for the treatment, sympathy for his difficulties and confidence that everything will be all right. (2, 4, 22, 29, 36, 45)

The reliability of the questionnaire was tested to see if it was consistently reproducible. The test-retest method was utilized on 29 patients who had received emergency department care. A positive correlation of +.86 was computed, using the Pearson product-moment correlation formula indicating a high degree of relationship between the variables. (56)

Finally it was determined that the scale allowed for a high

degree of sensitivity because, by using a line that is ten centimeters long, it could convert readily into ten equal scalar intervals. Still these ten subdivisions would not confuse the user because the division would not be made until the questionnaires were returned. This, of course, allows a more precise measurement of satisfaction and dissatisfaction as well as a larger neutral zone. (56)

Pilot Study

Fifty outpatients from the Multnomah County Hospital who had received emergency department care and had been released were sent questionnaires in the pilot study. The names and addresses of these patients were obtained from the hospital roster starting on a Monday and going through part of Tuesday until there was a total of 50. Over a period of two weeks, 33 were returned. There did not appear to be any difficulty in making responses to the items. Computations of the statistical measurements, including both chi-square diviations and gamma values, were made and proved to be feasible. No data obtained in the pilot study were used in the final study. (See pilot study data, Appendix C)

The Setting for the Study

The administrators and directors of nursing of four metropolitan hospitals in the city of Portland, Oregon, were contacted and

interviewed informally and each of them not only expressed a positive attitude toward nursing research but also indicated a willingness to cooperate in the making of this study. (See correspondence, Appendix A) The hospitals that participated in the study had 317, 371, 470, and 480 beds respectively in their physical plants. Each of the hospitals maintained an active emergency department.

Determination of the Size of the Sample

A statistical formula was used to determine the sample size of the study. This was done by first determining which of the questions of the pilot study had the largest standard deviation. Question 7 of the pilot study "Was the service prompt?" presented the largest standard deviation. Using the standard deviation and the mean of Question 7 of the pilot study and applying it to the formula for sample size computation, it was determined that the sample size would have to be at least a total of 28 when the actual number of patients receiving emergency department care in the four hospitals during the one week period was 1092. To allow for a possible higher deviation in the actual study, the sample size was increased to 200, thus allowing a safe margin over the computed sample size of 28.

Selection of the Study Population

After the pilot study was analyzed it was determined that a stronger study would be made if a random sampling technique were used instead of an arbitrary selection of patients from a Monday and Tuesday roster as was done in the pilot study. A total of 1092 patients were actually given emergency department care in the four hospitals during the week chosen for the study. From these 1092 patients, a total of 200 (50 from each hospital) were chosen to be sent questionnaires on a random sample basis using Japanese icosahedron dice. These dice, which are 20-face-dice differently colored in red, yellow and blue, are random generating dice which, according to the Japanese Standards Association, assures a fair random sample. (42) Using these icosahedron dice, 113 men and 87 women were picked as the population of this study, these 200 being selected from the 1092 outpatients actually receiving emergency department care during the same one week period chosen for the study.

Procedure for Collecting Data

Two hundred questionnaires were printed and mailed to the outpatients selected together with an envelope provided for the return. To facilitate easy and quick response, a pencil was enclosed with each of the forms. During the three-week period following the

mailing, 137 questionnaires were returned including 72 from men and 65 from women and 32, 35, 35, and 35 from patients of the four hospitals respectively. Five of the questionnaires were returned unanswered. A code was used in the signing of the investigator's signature to determine whether the respondent was a man and to determine in which hospital he or she had received the emergency treatment. For questionnaires sent to men the middle initial of the investigator was not used in the signature; for questionnaires sent to women the middle initial was used. Four different colored inks were used--black, blue, red and green--to represent the four different hospitals. The data collecting device may be found in Appendix B.

The number of usable questionnaires was 66% of the number distributed which was considered large enough to provide the data necessary to conduct this study.

Table 1 has been constructed to show the distribution and return of the questionnaires.

Table 1. Number and percentage distribution of questionnaires mailed and returned.

Hospital	Number Mailed	Number of Usable Returns	Percent Usable
(1)	(2)	(3)	(4)
1	50	34	68
2	50	34	68
3	50	33	66
4	50	31	62
Totals	200	132	66

Procedure for Scoring the Data

The ten centimeter line for each of the eight questions on the questionnaire was divided into the ten scalar intervals to record the range of number attitudes. Table 2 was constructed to present a summary of the 132 usable questionnaires.

Each question was also arranged in a tabular presentation of scale values by ten percentile classes, which tables will be presented in the analysis of the data. The tabulation in Table 2 was also used to determine chi-square and gamma measures in order to test the hypothesis dealing with the several factors relating to the over-all satisfaction or dissatisfaction with emergency department care. The relationship between Question 1 and each of the other questions had to be tested to determine if any of the factors expressed in Questions 2 through 8 played a significant part in the patient's over-all feelings of satisfaction with the emergency department care. For this purpose, the chi-square test of significance was conducted to determine whether frequencies empirically obtained differ significantly from those which would be expected under a certain set of theoretical assumptions. This is done by setting up a cross-correlation matrix between Question 1 and each of the other seven questions. Question 1 dealing with over-all satisfaction of care was first sorted into three scale classes, low (scale values 1-4), medium

Table 2. Summary of attitudes expressed on 132 questionnaires according to scalar intervals.

Question Number	Scalar Intervals										Total
(1)	(2)				(3)		(4)				(5)
	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	
1	5	5	3	5	6	5	2	9	14	78	132
2	3	2	2	1	8	4	1	13	10	88	132
3	8	1	4	4	10	3	2	10	9	81	132
4	8	3	2	1	4	3	8	10	12	81	132
5	8	1	2	2	7	4	3	7	10	88	132
6	10	3	5	2	6	4	2	4	14	82	132
7	12	3	4	2	3	4	6	6	17	75	132
8	7	5	1	1	6	5	6	6	15	80	132
	dissatisfaction				neutral		satisfaction				

(scale values 5 and 6), and high (scale values 7-10). This resulted in 18 low, 11 medium and 103 high out of the 132 responses to Question 1. It was seen, however, that of the 18 who answered low on Question 1, only eight of these answered low on Question 2 while four of the 18 answered medium and six answered high on Question 2. Of the 11 who answered in the medium range for Question 1, it was noted that six of these answered in the medium range on Question 2 and five answered in the high range. Finally of the 103 who answered high on Question 1 all but two of these answered the same way on Question 2.

The actual responses to Question 1, "Was the overall care satisfactory?" were as follows:

18 low 11 medium 103 high

But, these same people responded a little differently to Question 2, "Were you made physically comfortable?" in this way:

8 low	6 medium	2 medium
4 medium	5 high	101 high
6 high		

These seven distributions of response to the second question--8, 4, 6, 6, 5, 2 and 101 provide the observed cell frequencies and the basis for computing the expected cell values allowing for the computation of the chi-square and its comparison with the table value to determine whether or not there is a relationship between Question 1 and Question 2, or to be more specific, whether the patient's feelings

as to whether or not he was made physically comfortable affected his over-all attitude regarding his satisfaction with his total care.

Since the chi-square indicates only that a relationship does exist between the variables but does not show the strength of that relationship, the gamma measure developed by Leo A. Goodman and William H. Kruskal (49) was also used to test the strength of the association. The gamma measure uses the same matrix employed in the chi-square computation by determining the extent of concordance and discordance in the matrix. Table 3 has been constructed to show the actual cross-correlation matrix of Questions 1 and 2 recording the actual responses of the 132 participants to each of the two questions.

Table 3. Cross-correlation matrix showing relationship of physical comfort to overall care.

Question 2 Were You Made Physically Comfortable?	Question 1 Was the Overall Care Satisfactory?			
	Low	Medium	High	Row Totals
Low	8			8
Medium	4	6	2	12
High	6	5	101	112
Column totals	18	11	103	132

To determine the amount of concordance, the value of the upper left-hand cell is multiplied by the sum of all cells to the right and

below this cell. In Table 3 this would be 8(6 + 2 + 5 + 101). This process is effected for each cell value that has at least one cell position to the right and below its position. In this case these are 8, 4, and 6. These values, multiplied by the sums of the respective cells below and to the right give the numerical value of the concordance. The discordance must also be computed in a manner similar to the concordance with the important exception of the starting point, which is the upper right-hand cell value, multiplied by the sum of all the cells below and to the left of this value, 2 (5 + 6). This is done for all four cells in the upper left section of the table, and the total numerical value gives the discordance. Concordance-discordance divided by concordance plus discordance gives the gamma measure. It should be realized that the gamma measure is concerned with the degree of association, whereas the chi-square test yields a specific value, providing the basis for accepting or rejecting the null hypothesis which states that no statistically significant association exists between the cross-correlated variables.

A computer program designed to compute chi-square tests of significance and gamma measures of association had been written and was made available to the investigator. This program was utilized to cross-correlate Question 1 with each of the other questions. The results of these computations are presented in the analysis of the data. The computations were un on an International

Business Machine 1401, 12K system using one-tape drive for program operations. (76)

Analysis of the Data

The Over-all Reaction of Outpatients Treated in the Emergency Departments

The first hypothesis tested in the study was: the over-all reaction of outpatients who have been treated in the emergency departments of four metropolitan hospitals is not that of general satisfaction with the care received.

The first question was this: Was the over-all care satisfactory? Table 4 has been constructed to show the responses of the participants to this first question.

Table 4. Range of responses by ten percentile classes regarding over-all satisfaction of care.

Scalar Interval	Range of Attitudes	Number	Percent of Respondents
(1)	(2)	(3)	(4)
0-10	low	5	3.79
11-20	low	5	3.79
21-30	low	3	2.27
31-40	low	5	3.79
41-50	medium	6	4.55
51-60	medium	5	3.79
61-70	high	2	1.52
71-80	high	9	6.82
81-90	high	14	10.61
91-100	high	78	59.09

Figure 1 presents this information in a histogram and also the mean value.

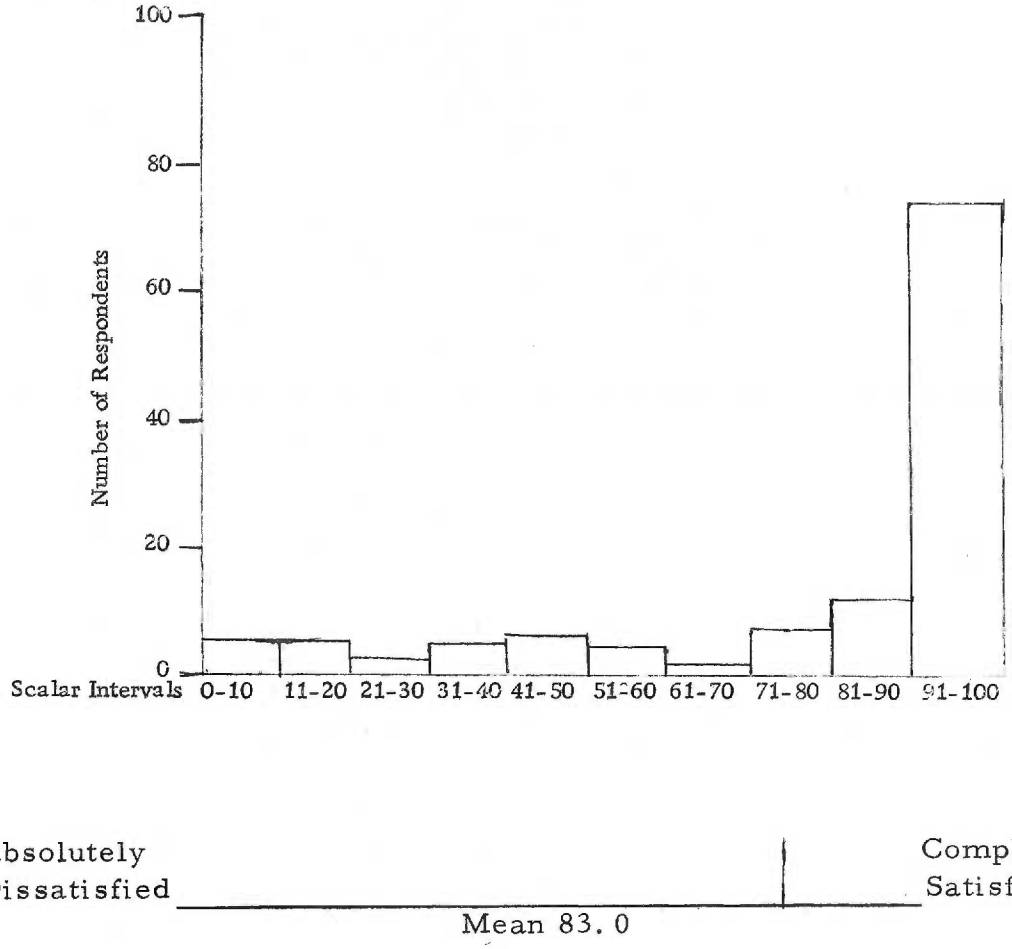


Figure 1. Patient satisfaction with over-all care.

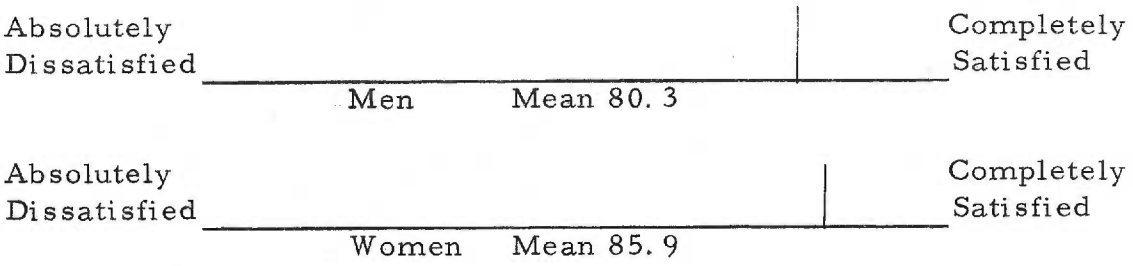
It is noted that of the 132 respondents, 103 answered Question 1 by marking in the four top scalar intervals indicating that they were satisfied with their over-all care. This comprises 78.04% of the respondents who were satisfied with their over-all care, as opposed to only 13.64% who were dissatisfied, with 8.34% expression no opinion. Of the 103 who expressed satisfaction with the care, it is

noteworthy that 78 of these respondents marked in the highest level of scalar intervals indicating an attitude of complete satisfaction with the care received. At the other end of the contiuum only five respondents checked in the lowest scalar interval indicating complete dissatisfaction.

Of the 72 questionnaires returned by men four were unanswered. Of the 68 male respondents, 50 indicated that they felt satisfied with their over-all care in the emergency departments, six expressed no opinion by marking in the neutral zone, and 12 expressed dissatisfaction. Sixty-four of 65 questionnaires returned by women were completely answered and 53 indicated that they were satisfied with the over-all care with only six indicating dissatisfaction and five marking in the neutral zone. Table 5 has been constructed as a comparison of male and female satisfaction with over-all care.

Table 5. Patient satisfaction with over-all care comparing responses of men and women.

	Men N = 68		Women N = 64	
Attitude	Number	Percentage of Respondents	Number	Percentage of Respondents
(1)	(2)	(3)	(4)	(5)
Satisfied	50	73.52	53	82.82
No opinion	6	8.82	5	7.82
Dissatisfied	12	17.65	6	9.36



The over-all mean of all patients of 83.0 is balanced by the mean of the male respondents of 80.3 and the mean of the female respondents of 85.9. Taken all together 78.04% of the patients expressed satisfaction with the care received again balanced by the fact that only 73.52% of the male patients expressed satisfaction while 82.82% of the female patients expressed satisfaction. The findings would disprove the hypothesis that the over-all reaction of outpatients who have been treated in the emergency rooms of four metropolitan hospitals is that of general dissatisfaction with the care received. The contrary is true--patients are generally satisfied with their over-all care received in these emergency departments.

Patients' Feelings Regarding Physical Comfort

The second hypothesis to be tested was that the patient's feelings regarding his physical comfort did not bear a significant relationship on his over-all reaction to his emergency care. The second item of the questionnaire was:

"Were you made physically comfortable? (Were the facilities, furniture, lighting, temperature, etc., in the waiting room and treatment room such as to make you feel comfortable under the circumstances?)

Absolutely Dissatisfied		Completely Satisfied

Of 132 participants, all but 20 answered that they were satisfied with the efforts made to make them feel physically comfortable under the circumstances. One-hundred-twelve respondents indicated that they felt satisfied, and of this number 88 marked in the highest scalar interval indicating complete satisfaction. Only eight of the respondents indicated that they were dissatisfied, and of this number, only three marked the lowest scalar interval of the continuum. It would appear that there was a general feeling among the patients that they were satisfied with this particular factor. Table 6 presents this information. Figure 2 presents this information in a histogram and also the mean value.

In addition, however, the study was designed to determine if the feeling regarding being made physically comfortable had any relationship to the feeling of over-all care. To do this, the chi-square test of significance and the gamma measure of association were used. Table 7 was constructed to show the chi-square derivation and gamma value determined from the cross-correlation matrix.

Table 6. Range of responses by ten percentile classes regarding being made physically comfortable.

Scalar Interval (1)	Range of Attitudes (2)	Number (3)	Percent of Respondents (4)
0-10	low	3	2.27
11-20	low	2	1.52
21-30	low	2	1.52
31-40	low	1	.76
41-50	medium	8	6.06
51-60	medium	4	3.03
61-70	high	1	.76
71-80	high	13	9.85
81-90	high	10	7.58
91-100	high	88	66.67

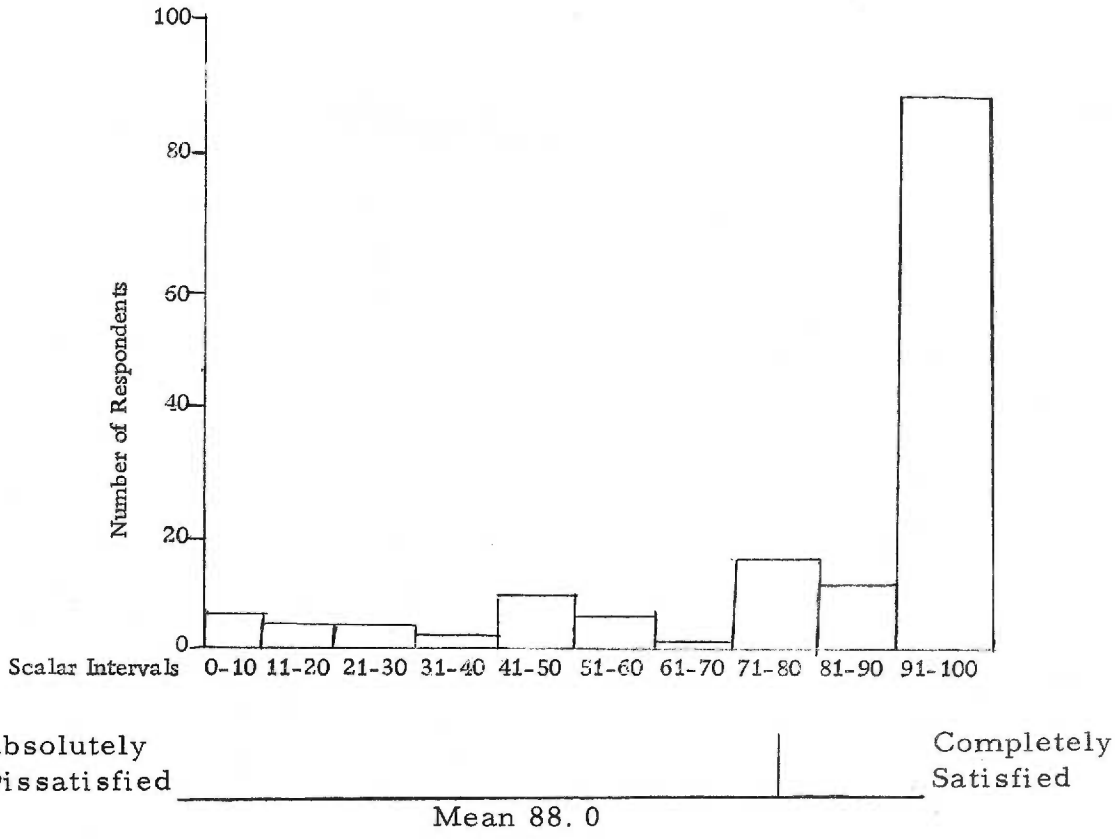


Figure 2. Patient satisfaction with physical comfort.

Table 7. Relationship between physical comfort and over-all care showing chi-square derivation and gamma value.

f Observed Frequencies	e Expected Frequencies	f - e	f - e Squared	$\frac{(f-e)^2}{e}$
(1)	(2)	(3)	(4)	(5)
8	1.091	6.909	47.734	43.753
	.667	.667	.445	.667
	6.242	6.242	38.963	6.242
4	1.636	2.364	5.588	3.416
6	1.000	5.000	25.000	25.000
2	9.364	7.364	54.228	5.791
6	15.273	9.273	85.989	5.630
5	9.333	4.333	18.775	2.012
101	87.394	13.606	185.123	2.118
			Total	94.629
			Table value	9.488
			Gamma value	.942

The computed chi-square value of 94.629 is higher than the table value of 9.488 with four degrees of freedom at the 95% level of confidence. The null hypothesis which states that there is no relationship between the patient's feelings regarding his being made physically comfortable under the circumstances and his feelings regarding his over-all care is therefore rejected, and an alternative hypothesis which states that there is a relationship between the patient's feelings as to his being made physically comfortable and his feelings as to his over-all care, is accepted.

Using the gamma measure it is seen that not only is there a significant relationship, but the strength of association is very high.

A gamma measure can produce either a positive or a negative value and any positive value is evidence of association. A gamma value of less than .20 may be viewed as not being statistically significant though it is in fact positive. Measuring the strength of association between Questions 1 and 2 in this study, it is seen that the gamma value produced is a positive value of .942 which indicates a very high degree of association, i.e., the fact that the patient felt that he was made physically comfortable under the circumstances was very important to his feelings that he was satisfied with his over-all care.

Patients' Feelings Regarding Being Given Confidence

The third hypothesis to be tested was that the patient's feelings regarding his being given confidence did not bear a significant relationship on his over-all reaction to his emergency care. The third question of the questionnaire reads: "Were you given confidence? (Were you assured that help was on the way?)"

Absolutely Dissatisfied _____ Completely Satisfied

One-hundred-two of the 132 respondents expressed an attitude of satisfaction regarding their being given a feeling of confidence during the time they were receiving their emergency department treatment. In contrast, 17 individuals expressed a feeling of dissatisfaction regarding this factor. While this reflects a high

percentage of satisfaction (77.28%), it is about 7.5% less than the percentage of those who were satisfied with being made physically comfortable. In numbers it is ten less than the number who were satisfied with the factor contained in Question 2, and there are nine more who expressed dissatisfaction regarding this factor when compared with Question 2. Still the mean of 82.9 indicates general satisfaction even though it is more than five points below the mean determined for Question 2. So while it would appear that the patients were generally satisfied with the sense of confidence that was given to them, they were not as satisfied with regard to this factor as they were regarding their being made to feel comfortable under the circumstances.

The chi-square and gamma measures were computed in the same manner as in Table 7, and resulted in a chi-square value of 76.096 and a gamma value of .916. Again the computed chi-square value of 76.096 is higher than the table value of 9.488, with four degrees of freedom and a 95% confidence level, indicating that the null hypothesis stating that there is no relationship between the patient's feelings regarding his being given confidence and his feelings regarding his overall care is rejected. There is a relationship between the patient's feelings of confidence and his over-all care. The gamma value of .916 indicates a high degree of association. However, it is to be noticed that the strength of association is not as

high between Question 1 and Question 3 as it was between Question 1 and Question 2. Table 8 presents the responses of the participants to this question dealing with feelings as to whether or not the patient felt he was given confidence.

Table 8. Range of responses by ten percentile classes regarding being given confidence.

Scalar Interval	Range of Attitudes	Number	Percent of Respondents
(1)	(2)	(3)	(4)
0-10	low	8	6.06
11-20	low	1	.76
21-30	low	4	3.03
31-40	low	4	3.03
41-50	medium	10	7.58
51-60	medium	3	2.27
61-70	high	2	1.52
71-80	high	10	7.58
81-90	high	9	6.82
91-100	high	81	61.36

Figure 3 presents this information in a histogram and also the mean value.

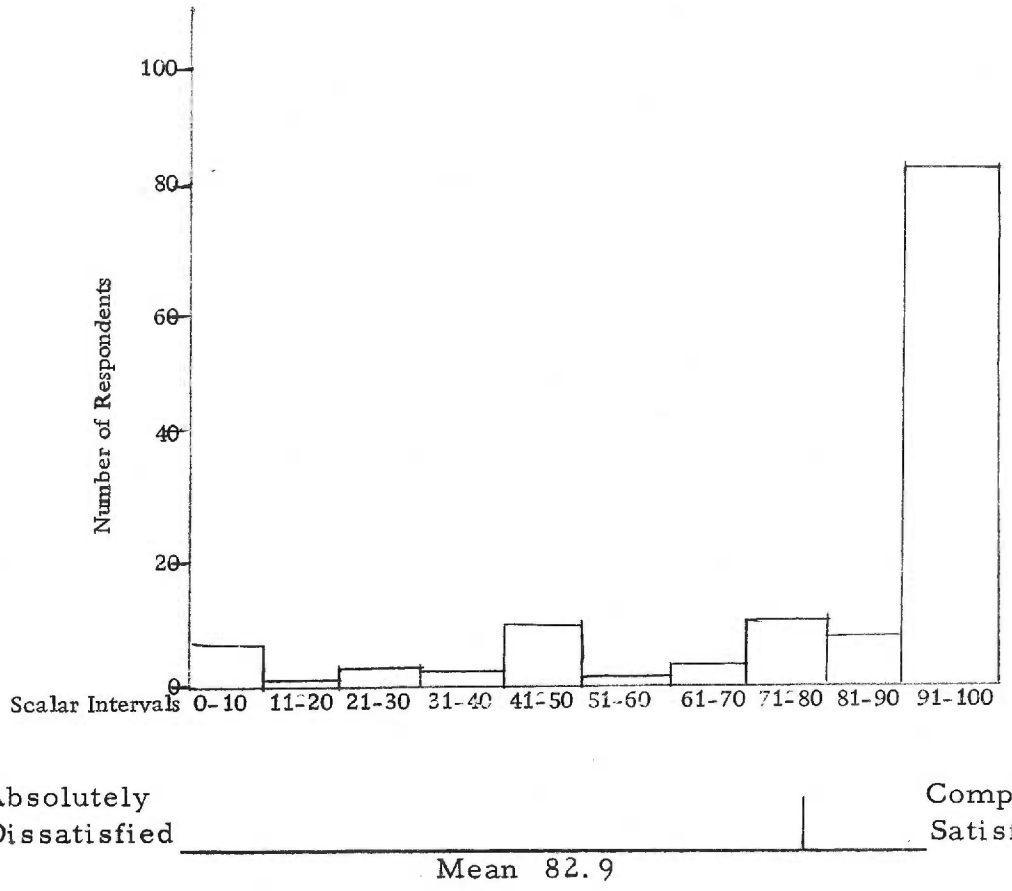


Figure 3. Patient satisfaction with being given confidence.

Patients' Feelings Regarding the Service Being Performed Skillfully

The fourth hypothesis to be tested was that the patient's feelings regarding the service being performed in a skillful manner did not bear a significant relationship on his over-all reaction to his emergency care. The fourth question of the questionnaire reads:

"Was the service performed in a skillful manner? (Did the doctor, nurse, and others who helped you appear to know exactly what they were doing at all times?)

Absolutely Dissatisfied _____ Completely Satisfied

In numbers, 111 out of the 132 respondents expressed a feeling of satisfaction with the services being performed in a skillful manner with only 14 expressing a feeling of dissatisfaction. The numbers expressing satisfaction represented a percentage of 84.09 of the respondents as opposed to 10.61% who felt dissatisfied with the performance of the service.

The correlation matrix between Question 1--was the over-all care satisfactory?--and Question 4--was the service performed in a skill manner?--showed that of the 103 respondents who answered high on Question 1, 98 answered high on Question 4 with two responding in the neutral range and three answering low. On the other end of the continuum, of the 18 who answered low on the first question, six answered high, three in the neutral range and nine answered low. The chi-square derivation and gamma value computed from this correlation matrix were 50.257 and .878. Since the computed chi-square value of 50.257 is higher than the table value of 9.488, with four degrees of freedom and a 95% confidence level, the null hypothesis is rejected and it is determined that there is a relationship between the patient's feelings regarding the service being performed in a skillful manner and his feelings regarding his over-all care. While the gamma value of .878 is not as high as it was when

relating Questions 2 and 3 to Question 1, it still indicates a high degree of association between Question 4 and Question 1.

Table 9 presents the responses of the participants to this question dealing with the factor of the patient's feelings with regard to performance of the services, i.e., did he feel that the services were performed in a skillful manner or not?

Table 9. Range of responses by ten percentile classes regarding the skillfulness of the services.

Scalar Interval	Range of Attitudes	Number	Percent of Respondents
(1)	(2)	(3)	(4)
0-10	low	8	6.06
11-20	low	3	2.27
21-30	low	2	1.52
31-40	low	1	.76
41-50	medium	4	3.03
51-60	medium	3	2.27
61-70	high	8	6.06
71-80	high	10	7.58
81-90	high	12	9.09
91-100	high	81	61.36

Figure 4 presents this information in a histogram and also the mean value.

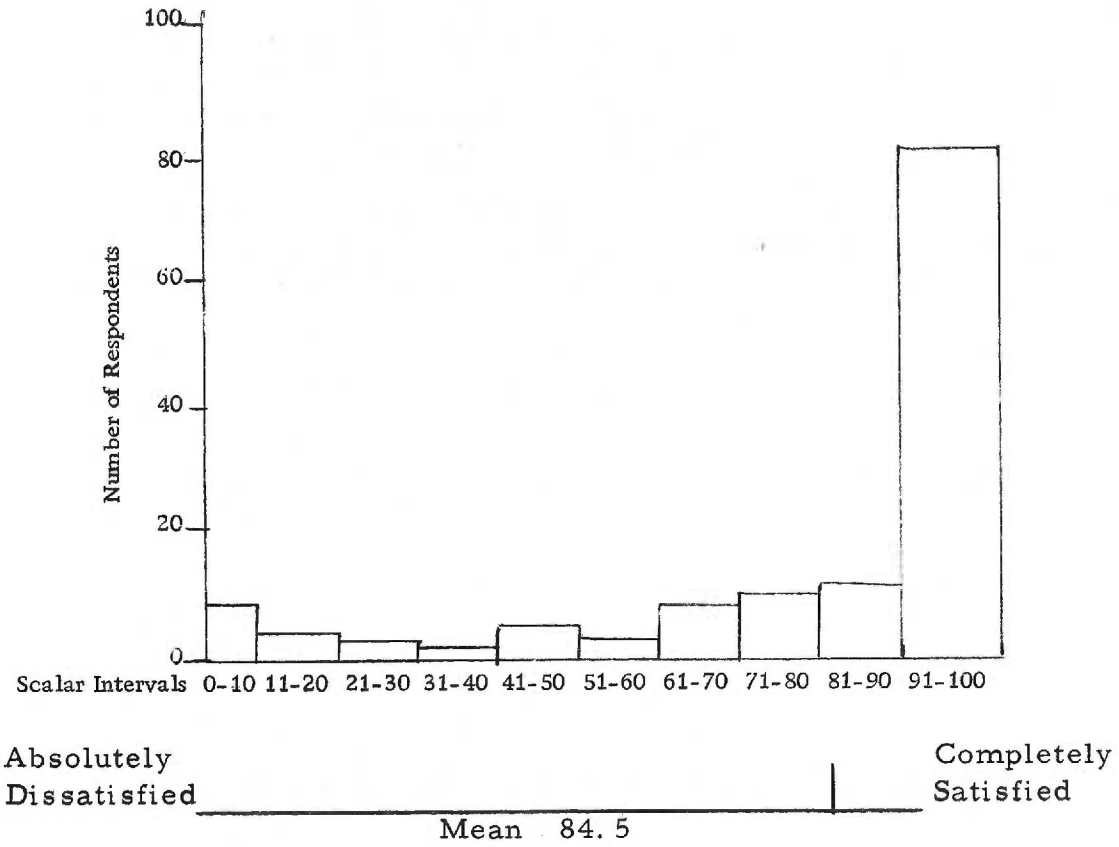


Figure 4. Patient satisfaction with services being performed skillfully.

Patients' Feelings Regarding the Nurse Being Sympathetic

The fifth hypothesis to be tested was that the patient's feelings regarding the nurse being sympathetic did not bear a significant relationship to his over-all feelings regarding his emergency department care. The fifth question of the questionnaire reads:

"Was the nurse sympathetic? (Was the nurse helpful, courteous, friendly and understanding?)"

Absolutely Dissatisfied _____ Completely Satisfied

Expressions of satisfaction were indicated by 108 of the 132 respondents feeling that the nurse was sympathetic, understanding and helpful. Thirteen participants said they were dissatisfied and eight of these marked in the lowest possible scalar interval. At the opposite extreme 88 respondents marked in the highest scalar interval expressing complete satisfaction in their feelings that the nurse was sympathetic. Those indicating that they were satisfied with regard to this factor represented 81.82% of the participants. The computed chi-square derivation and gamma value in the relationship of Question 5 to Question 1 were 64.316 and .905 with four degrees of freedom and a 95% confidence level. Again the computed chi-square was higher than the table value of 9.488, and the null hypothesis stating that there was no relationship between the patient's feelings regarding the nurse being sympathetic and the patient's feelings regarding his over-all care is rejected. There is a relationship between the two questions, and the gamma value being .905 indicates that the strength of association is very great.

Table 10 was constructed to record the attitudes of the 132 respondents to the question of whether or not they felt that the nurse

was sympathetic.

Table 10. Range of responses by ten percentile classes regarding the nurse being sympathetic.

Scalar Interval	Range of Attitudes	Number	Percent of Respondents
(1)	(2)	(3)	(4)
0-10	low	8	6.06
11-20	low	1	.76
21-30	low	2	1.52
31-40	low	2	1.52
41-50	medium	7	5.30
51-60	medium	4	3.03
61-70	high	3	2.27
71-80	high	7	5.30
81-90	high	10	7.58
91-100	high	88	66.67

Figure 5 presents this information in a histogram and also the mean value.

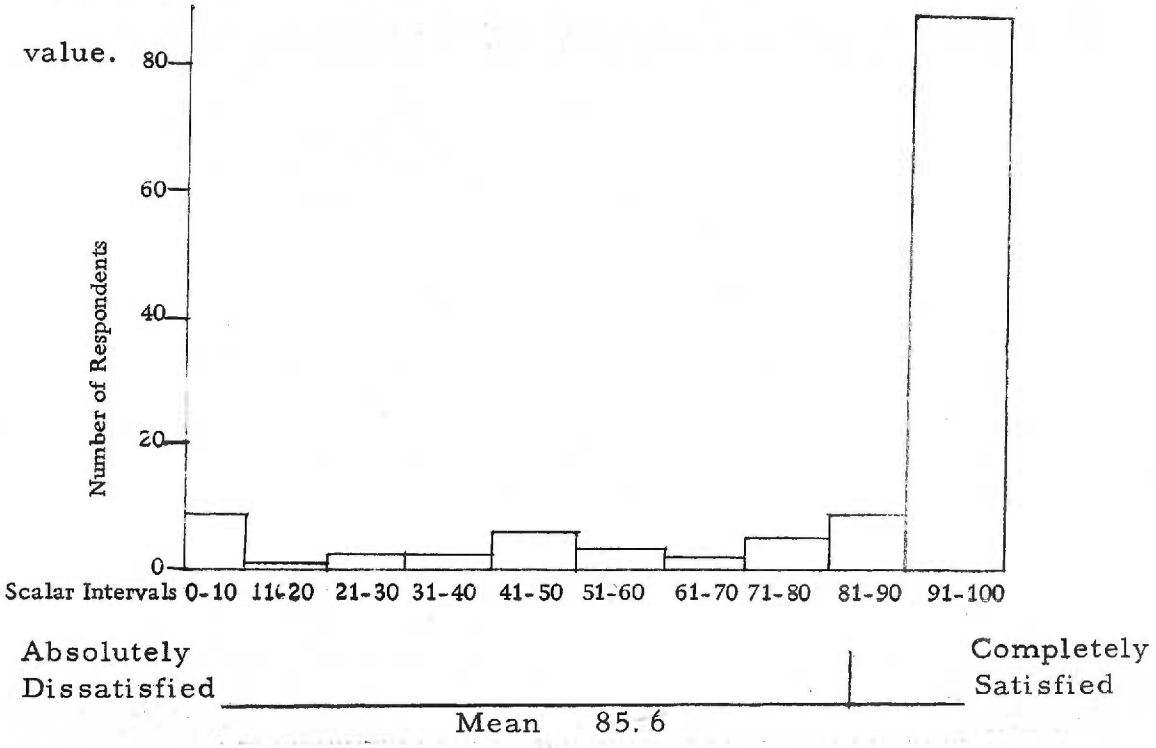


Figure 5. Patient satisfaction with the nurse being sympathetic.

Patients' Feelings Regarding Communication

The sixth hypothesis to be tested was that the patient's feelings regarding there being sufficient communication did not bear a significant relationship to his over-all feelings regarding his emergency department care. The sixth question of the questionnaire reads:

"Was there sufficient communication? (Were you given an explanation of what was wrong with you and what would be done for you?)"

Absolutely Dissatisfied _____ Completely Satisfied

As was the case with Question 3, 102 of the respondents expressed feelings of satisfaction. While this is 77.28% of the total number of participants it is somewhat lower than the expressions of satisfaction recorded for Questions 2, 4, and 6. It would appear that of the five factors considered so far: physical comfort, confidence, service performed skillfully, nurse sympathy, and sufficient communication, that the patients were less satisfied with regard to confidence and sufficient communication than the other factors. It may very well be that giving a sense of confidence and giving sufficient communication are closely akin to each other.

The relationship between Questions 1 and 6, i.e., between the patient's over-all feelings as to his emergency care and his feelings regarding there being sufficient communication is established by

the computed chi-square value of 36.705 which is higher than the table value of 9.488, with four degrees of freedom and a 95% confidence level. The gamma value of .761 indicates that the degree of association between the two factors is quite high. The null hypothesis stating that there is no relationship between the two factors is rejected.

Table 11 presents the feelings of the respondents regarding the above question.

Table 11. Range of responses by ten percentile classes regarding sufficient communication.

Scalar Interval	Range of Attitudes	Number	Percent of Respondents
(1)	(2)	(3)	(4)
0-10	low	10	7.58
11-20	low	3	2.27
21-30	low	5	3.79
31-40	low	2	1.52
41-50	medium	6	4.55
51-60	medium	4	3.03
61-70	high	2	1.52
71-80	high	4	3.03
81-90	high	14	10.61
91-100	high	82	62.12

Figure 6 presents this information in a histogram and also the mean value.

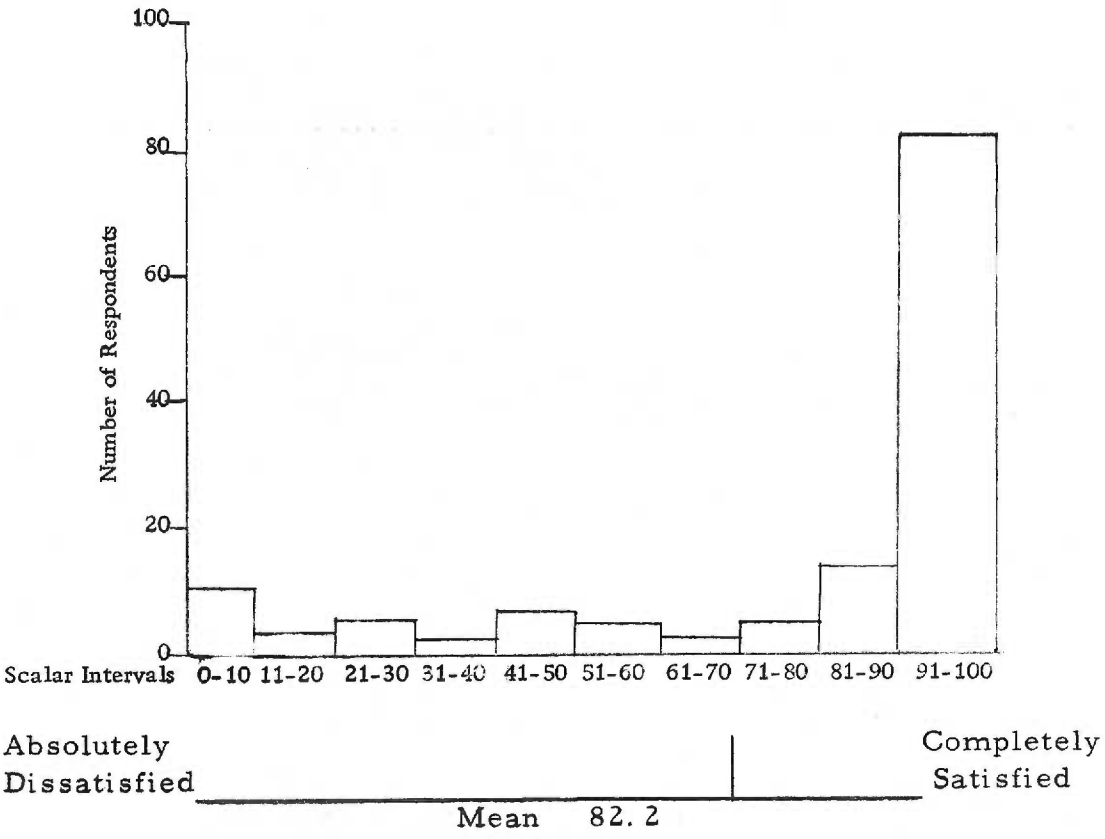


Figure 6. Patient satisfaction with communication.

Patients' Feelings Regarding the Promptness of the Service

The seventh hypothesis to be tested was that the patient's feelings regarding the service being prompt did not bear a significant relationship to his feelings regarding his over-all care. The seventh question of the questionnaire reads:

"Was the service prompt? (Was the treatment performed in a quick and efficient manner under the circumstances?)"

Absolutely Dissatisfied _____ Completely Satisfied

One-hundred-four of the respondents indicated they were satisfied with the promptness of the service as opposed to 21 who were dissatisfied regarding this factor. Looking at the numbers it appears that 12 participants marked the lowest possible scalar interval -- this was the highest number to mark in the lowest scalar interval when all eight questions are compared. At the other extreme, 75 persons marking at the highest scalar interval was the fewest number to mark at this extreme end of the continuum when all the questions are compared. It appears that even though 78.8% of the participants were satisfied with the promptness of the service, that more participants were dissatisfied regarding the factor of promptness of care than with any other factor considered in the study.

Considering the chi-square value that was computed of 48.245, with four degrees of freedom and a 95% confidence level, and the gamma value of .825 it is seen that there was a relationship between Question 7 and Question 1, i.e., the patient's feelings regarding the promptness of the service affected his feelings regarding his overall care. The null hypothesis is therefore rejected. The gamma value of .825 indicates that the strength of association between the two factors was again very high.

Table 12 presents the feelings of the participants as to whether or not they felt that the service was prompt.

Table 12. Range of responses by ten percentile classes regarding promptness of service.

Scalar Interval	Range of Attitudes	Number	Percent of Respondents
(1)	(2)	(3)	(4)
0-10	low	12	9.09
11-20	low	3	2.27
21-30	low	4	3.03
31-40	low	2	1.52
41-50	medium	3	2.27
51-60	medium	4	3.03
61-70	high	6	4.55
71-80	high	6	4.55
81-90	high	17	12.88
91-100	high	75	56.82

Figure 7 presents this information in a histogram and also the mean value.

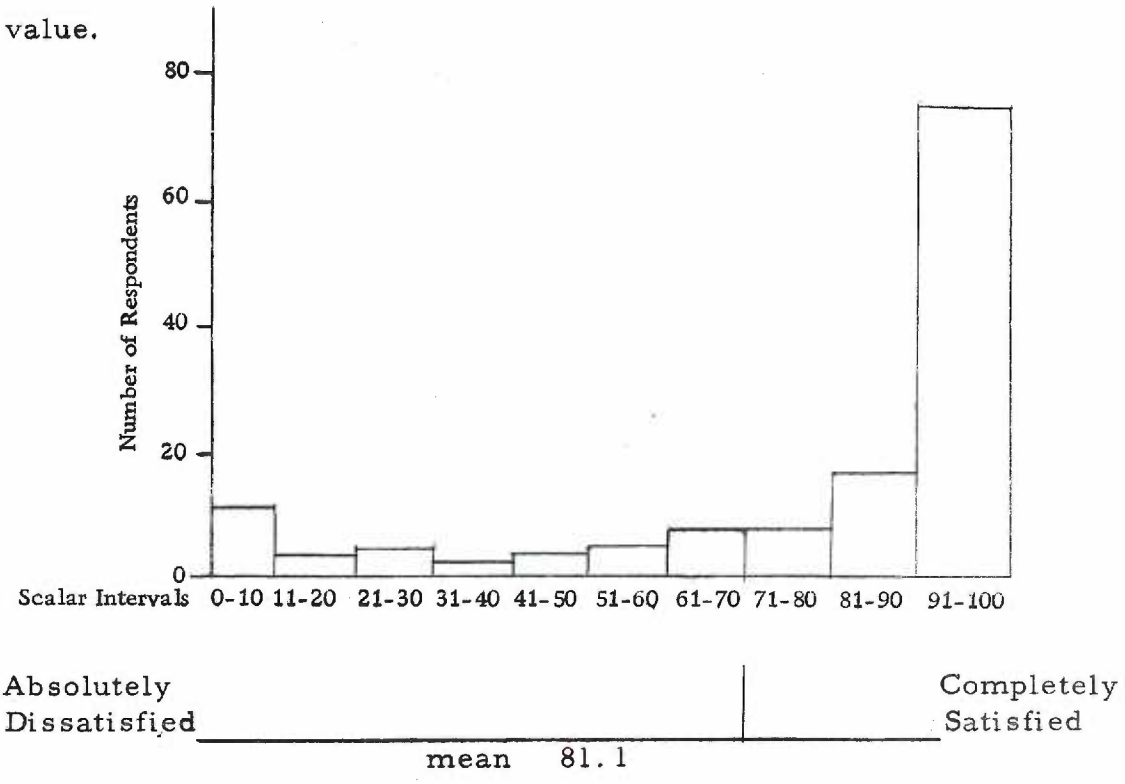


Figure 7. Patient satisfaction with promptness of care.

Patients' Feelings Regarding the Handling of the Record-Keeping

The eighth hypothesis to be tested was that the patient's feelings regarding the record-keeping being handled well did not affect his feelings regarding his over-all care. The eighth and last question of the questionnaire reads:

"Was the record-keeping handled well? (Was the paper work handled with a minimum of red tape and inconvenience?)"

Absolutely Dissatisfied _____ Completely Satisfied

On the last question, 107 of the respondents indicated attitudes of satisfaction with the way that the record-keeping was handled, and 14 expressed a feeling of dissatisfaction. The number marking in the four scalar intervals indicating satisfaction with the manner in which the record-keeping was handled was 81.07% of the participants. The computed chi-square value was 48.037, higher than the table value of 9.488, and the null hypothesis, to the effect that there was no relationship between the patient's feelings as to the handling of the record-keeping and feelings as to his over-all care, is rejected. The gamma value of .805 indicates a high degree of relationship between the two variables.

Table 13 was constructed to record the feelings of the respondents as to whether or not they felt that the record-keeping was handled well.

Table 13. Range of responses by ten percentile classes regarding the handling of the record-keeping.

Scalar Interval	Range of Attitudes	Number	Percent of Respondents
(1)	(2)	(3)	(4)
0-10	low	7	5.30
11-20	low	5	3.79
21-30	low	1	.76
31-40	low	1	.76
41-50	medium	6	4.55
51-60	medium	5	3.79
61-70	high	6	4.55
71-80	high	6	4.55
81-90	high	15	11.36
91-100	high	80	60.61

Figure 8 presents this information in a histogram and also the mean value.

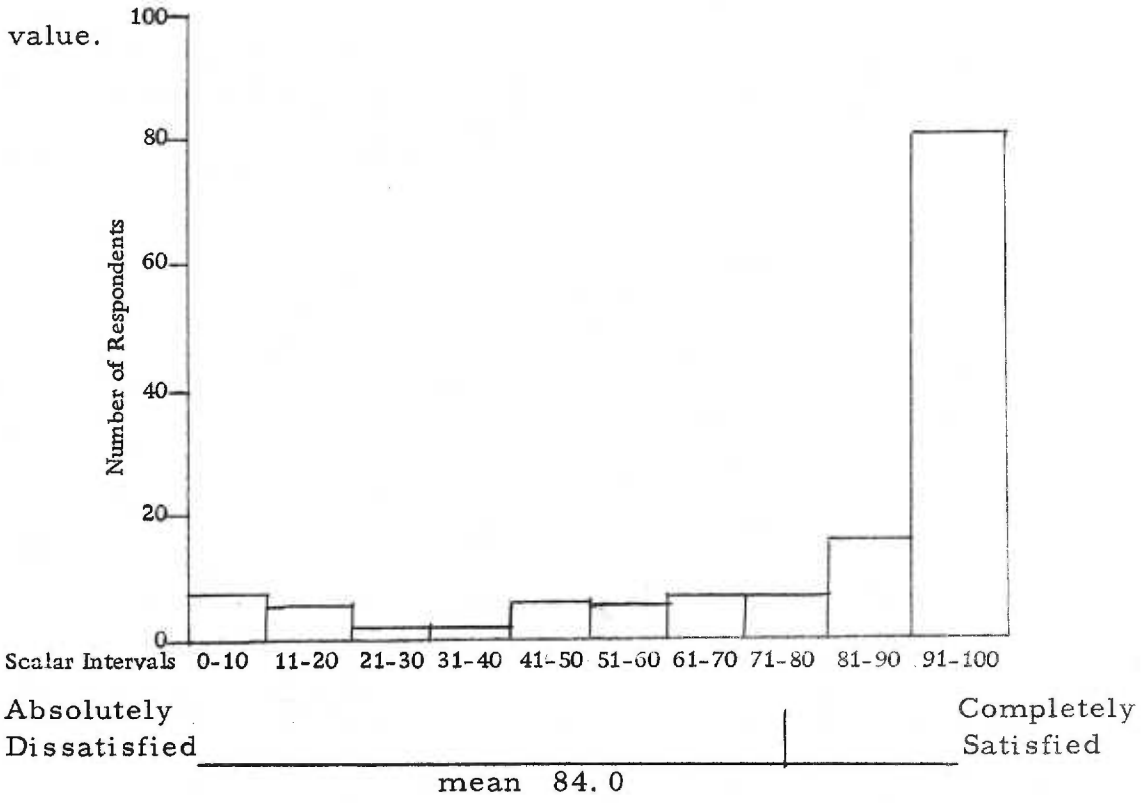


Figure 8. Patient satisfaction with the record-keeping.

Consideration of All Factors and Their Relationship to the Patients' Feelings as to Over-all Care

Looking at all the responses to all of the questions it is again pointed out that 103 of the respondents indicated that they were satisfied with their over-all care and only 18 expressed feelings of dissatisfaction. Looking at the other questions asked those respondents it can be seen that, taken as a group, more of them actually expressed satisfaction regarding their physical comfort, their feelings that the services were performed skillfully, their feelings as to the nurse being sympathetic, and their feelings as to the handling of the record-keeping, than they did with regard to their feelings as to their over-all care. Only with regard to three factors was there an indication that more were actually more dissatisfied with specific factors than they were with their over-all care. These factors dealt with their feelings regarding confidence, communication and promptness of service. Table 14 has been constructed to compare all the factors and show their relationship to the patients' feelings as to over-all care.

In every case regarding the factor analysis it is seen that the computed chi-square value is higher than the table value of 9.488 with the result that each of the factors has a significant relationship to the feelings of the patients toward their over-all care. The gamma measures are also all very much above the .20. In

Table 14. Comparison of all factors.

Question Number	Factor Analyzed	Number Expressing Satisfaction	Number Expressing Dissatisfaction	Relationship to Feelings as to Overall Care	
				chi-square value	gamma value
(1)	(2)	(3)	(4)	(5)	(6)
	Patients' Feelings as to:				
2	Physical Comfort	112	8	94.629	.942
3	Confidence	102	17	76.096	.916
4	Skillful Service	111	14	50.257	.898
5	Nurse Sympathy	108	13	64.316	.905
6	Communication	102	20	36.705	.761
7	Prompt Service	104	21	48.245	.825
8	Record Keeping	107	14	48.037	.805

Manning's study , 68 is considered to be a very strong positive association. (49) In this study the lowest association is . 761 and the highest is . 942. This would indicate that each of the factors tested has a high degree of association to the patient's feelings as to his over-all care.

Comparison of the Four Hospitals

The last hypothesis to be tested was: "there is no significant difference between the patients at each of the four different hospitals, when the feelings of the patients of each of the four hospitals are compared, as to their over-all reaction regarding their emergency care." Fifty questionnaires were sent to patients from each hospital with the following responses: Hospital A, 31 responses; Hospital B, 33 responses; Hospital C, 34 responses; and Hospital D, 34 responses. Table 15 has been constructed to show a comparison of the feelings of the patients, taken as a group, from each hospital. The combined percentages by low or dissatisfied, medium or no opinion, and high or satisfied were:

	Hospital A	Hospital B	Hospital C	Hospital D
dissatisfied	12. 90	15. 15	20. 58	5. 88
no opinion	3. 23	9. 09	11. 76	8. 82
satisfied	83. 87	75. 76	67. 65	85. 28

Table 15. Range of responses by ten percentile classes comparing the patients of the four hospitals as to over-all care.

Scalar Interval	Range of Attitudes	Number and Percent of Respondents by Hospital							
		Hospital A		Hospital B		Hospital C		Hospital D	
		#	%	#	%	#	%	#	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
0-10	low	2	6.45			2	5.88	1	2.94
11-20	low			1	3.03	3	8.82	1	2.94
21-30	low			2	6.06	1	2.94		
31-40	low	2	6.45	2	6.06	1	2.94		
41-50	medium			1	3.03	2	5.88	3	8.82
51-60	medium	1	3.23	2	6.06	2	5.88		
61-70	high			1	3.03			1	2.94
71-80	high	2	6.45	2	6.06	1	2.94	4	11.76
81-90	high	3	9.68	2	6.06	5	14.71	4	11.76
91-100	high	21	67.74	20	60.61	17	50.00	20	58.82
		31		33		34		34	

It is noted that the ranges of expression of satisfaction varied from a high of 85. 28% to a low of 67. 65% while the expressions of dissatisfaction varied from a low of 5. 88% to a high of 20. 58%. The patients of Hospital D, as a group, felt the most satisfied, than Hospital A, than Hospital B and finally Hospital C.

Using the formula for analysis of variance for four independent groups the obtained F ratio of 1. 04 is smaller than the value required in the critical value table of F with 3 and 128 degrees of freedom. It is concluded that the group means do not differ significantly--they are in fact 8. 68, 8. 3, 7. 65 and 8. 62--and the hypothesis, that there is no significant difference between the feelings of the patients of each of the four hospitals when the four groups are compared regarding their over-all care, is accepted. The feelings of the groups do not differ significantly.

When the various individual factors are compared between the four hospitals it is noted that the patients of Hospital A were generally satisfied with all aspects of their care, with their feelings of satisfaction ranging between 90. 33% of the participants feeling satisfied with the services being performed in a skillful manner down to 80. 65% of the participants feeling satisfied regarding the promptness of the service. None of the other hospitals had more than 80% of their participants responding favorably to every one of the eight questions on the questionnaire. The highest percentage of

participants responding with feelings of satisfaction to any question were the patients of Hospital D answering the third question of the questionnaire, "Was the service performed in a skillful manner?" with 94.12% responding that they were satisfied that it was. The lowest percentage of participants responding with feelings of satisfaction to any question were the patients of Hospital B answering the sixth question of the questionnaire, "was there sufficient communication?" with only 63.64% responding that they were satisfied, and 33.33% expressing feelings of dissatisfaction. Table 16 is presented to show the percentage of respondents by hospital to each of the questions of the questionnaire, other than the first question dealing with over-all care.

Table 16. Percentage comparison of responses by hospital to Questions 2 through 8.

Question and Factor	Attitude	Hospitals A	B	C	D
(1)	(2)	(3)	(4)	(5)	(6)
Question #2	Satisfied	87.11	87.87	79.41	85.30
Physical Comfort	Dissatisfied	6.45	3.03	7.82	5.88
Question #3	Satisfied	87.11	75.76	73.52	73.53
Confidence	Dissatisfied	9.68	15.15	17.64	8.82
Question #4	Satisfied	90.33	78.79	73.52	94.12
Skillful Service	Dissatisfied	3.23	15.15	17.65	5.88
Question #5	Satisfied	83.87	81.82	79.41	82.35
Nurse Sympathy	Dissatisfied	12.91	9.09	11.76	5.88
Question #6	Satisfied	83.87	63.64	82.35	79.41
Communication	Dissatisfied	9.68	33.33	8.82	8.82
Question #7	Satisfied	80.65	78.79	70.58	85.29
Prompt Service	Dissatisfied	6.46	18.18	26.47	11.76
Question #8	Satisfied	83.87	78.79	83.52	88.23
Record-keeping	Dissatisfied	9.68	15.15	8.82	8.82

CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary of the Study

There has been an ever increasing use by the public of the emergency departments of hospitals, and by 1972 it is estimated that hospitals will be providing eight units of ambulatory care to every inpatient admission. The public has developed the attitude that the emergency department is a place where anyone may apply at any time, with any kind of complaint, and receive prompt and courteous consideration. The impression the public receives of the emergency department is of the total hospital. Thus, as a matter of community relations, it is extremely important that the public not have feelings of dissatisfaction with the emergency care received in the emergency departments. This study was designed to determine primarily whether patients who have received emergency care in the emergency departments of four metropolitan hospitals express feelings of satisfaction or dissatisfaction with the care received.

In reviewing the literature it was determined that certain basic underlying factors may affect the outpatient's feelings regarding his over-all feelings of satisfaction or dissatisfaction. The facilities

and equipment themselves were considered important, as were delays of any sort. The stress that enters into the situation, along with efforts to make the patient feel as comfortable as possible under the circumstances, were cited as factors contributing to the problem. Communicating under stress, giving confidence, and offering sympathy were also considered to be underlying and overlapping dimensions. The questionnaire was designed with these various factors in mind in order to see to what extent the patient's specific attitudes regarding these things affected his feelings as to his over-all care.

Finally, the study attempted to compare the patients of the four hospitals, taken as four groups, to see if there were any significant differences in the feelings of these four groups.

Permission was obtained from Dr. D. James Manning to use the "profile scale" developed in his study entitled "An Illustration of the Application and Efficacy of Attitude Measurement as Exemplified in an Empirical Market Research Study." This scale was adopted, becoming a part of a questionnaire asking eight questions dealing with the patient's feelings of satisfaction or dissatisfaction regarding emergency department care previously received. This data collecting tool was tested for its reliability, and a pilot study was carried out. A minimum sample size was determined. The questionnaire was sent to 200 patients, 50 from each of four metropolitan hospitals, who had previously received emergency department care. There

were 132 usable responses. The following hypotheses were tested: 1. the over-all reaction of these patients would not be that of general satisfaction with the care received; 2. these patients' feelings as to whether or not: they were made physically comfortable, they were given confidence, the service was performed skillfully, the nurse was sympathetic, there was sufficient communication, the service was prompt, the record-keeping was handled well, had no significant relationship to their feelings as to their over-all care; 3. the patients considered as four groups, one group from each hospital, had no significant difference in their feelings as to their over-all care.

The data were tabulated; the computations were run on an International Business Machine 1401 12K system using chi-square tests of significance and gamma measures of association.

Findings of the Study

Findings of the study are summarized below:

1. The first findings of this study consisted of an analysis of data resulting from the responses to the first question on the questionnaire relating to feelings as to satisfaction with over-all care. More than 78% of the respondents expressed feelings of satisfaction with the over-all care with 13.64% expressing dissatisfaction.
2. Looking at this same data and comparing the responses of

men and women, the findings showed 82.8% of the women expressed satisfaction with 73.5% of the men expressing feelings of satisfaction.

3. Relating the several factors specifically tested to the patients' feelings as to over-all care the following findings resulted:

   a. There was a significant relationship between the patients' feelings regarding being made physically comfortable under the circumstances and their feelings regarding their over-all care. The computed chi-square value was 94.629 and the gamma value of .942 indicated a high degree of association.

   b. There was a significant relationship between the patients' feelings regarding being given confidence and their feelings regarding their over-all care. The computed chi-square value was 76.096 and the gamma value of .916 indicated a high degree of association.

   c. There was a significant relationship between the patients' feelings regarding the service being performed in a skillful manner and their feelings regarding their over-all care. The computed chi-square value was 50.257 and the gamma value of .878 indicated a high degree of association.

d. There was a significant relationship between the patients' feelings regarding the nurse being sympathetic and their feelings regarding their over-all care. The computed chi-square value was 64.316 and the gamma value of .905 indicated a high degree of association.

e. There was a significant relationship between the patients' feelings regarding there being sufficient communication and their feelings regarding their over-all care. The computed chi-square value was 36.705 and the gamma value of .761 indicated a high degree of association.

f. There was a significant relationship between the patients' feelings regarding the promptness of the service and their feelings regarding their over-all care. The computed chi-square value was 48.245 and the gamma value of .825 indicated a high degree of association.

g. There was a significant relationship between the patients' feelings regarding the handling of the record-keeping and their feelings regarding their over-all care. The computed chi-square value was 48.037 and the gamma value of .805 indicated a high degree of association.

4. Regarding the patients' expressed feelings as to satisfaction or dissatisfaction with each of the specific factors tested, the following findings resulted:
   a. 112 of 132 expressed satisfaction as to being made physically comfortable;
   b. 102 of 132 expressed satisfaction as to being given confidence;
   c. 111 of 132 expressed satisfaction as to their feelings that the services were performed skillfully;
   d. 108 of 132 expressed satisfaction as to their feelings that the nurse was sympathetic;
   e. 102 of 132 expressed satisfaction as to there being sufficient communication;
   f. 104 of 132 expressed satisfaction with the promptness of the services;
   g. 107 of 132 expressed satisfaction with the handling of the record-keeping.
5. Comparing the patients of the four hospitals, the findings indicated expressed feelings of general satisfaction by all four groups with the percentages of satisfaction varying from a high of 85.28% to a low of 67.65%. The group means of 8.68, 8.3, 7.65, and 8.62 did not vary significantly, the findings indicating that the patients of each hospital

expressed a general feeling of satisfaction with their over-all care.

Hypotheses Accepted and Rejected

The following hypotheses were rejected:

1. The over-all reaction of outpatients who have been treated in the emergency rooms of four metropolitan hospitals is that of general dissatisfaction with the care received.
2. None of the following factors bears a significant relationship on the outpatient's over-all reaction to his emergency care:
   a. The patient's feelings regarding physical comfort under the circumstances.
   b. The patient's feelings as to whether or not he was given a sense of confidence.
   c. The patient's feelings as to whether or not the service was performed in a skillful manner.
   d. The patient's feelings as to whether or not the nurse was sympathetic.
   e. The patient's feelings as to whether or not there was sufficient communication.
   f. The patient's feelings as to whether or not the service was prompt.

g. The patient's feelings as to whether or not the record-keeping was handled well.

The following hypothesis was accepted:

There is no significant difference between the responses of the patients of each of the four different hospitals, when the feelings of the patients of each of the four hospitals are compared, as to their over-all reaction regarding their emergency care.

Conclusions

The study was a descriptive survey of attitudes which outpatients were willing to express about the previous care received in emergency departments. The findings of this study lead to the following conclusions:

1. The Manning Scale, as adapted to this study, provided a useful tool for eliciting the attitudes of outpatients who had previously received emergency department care. It was particularly appropriate to this study because it not only allowed for the measurement of satisfaction, but did so by using a scale that allowed for a two-dimensional measurement of both direction and intensity of feeling regarding satisfaction of care. The results obtained from the use of the scale were appropriate for statistical analysis and allowed for computations of both the chi-square and

gamma values.

2. In general, the expressed feelings of the patients who responded to the questionnaire indicated feelings of satisfaction not only with the over-all care received, but also with the specific factors tested, i.e., physical facilities of the emergency department, the skillfulness of the personnel, the promptness of the service, and the communication with the patient.
3. The computed chi-square values indicated that there was a significant relationship between the patients' feelings as to each of the specific factors tested and their feelings as to their over-all care. The computed gamma values indicated that the degrees of association between their feelings as to the specific factors tested and their feelings as to their over-all care were very high.
4. In general, it did not make any difference in which of the four hospitals the patient had received his care with regard to his expressed feelings regarding his care as the result was approximately the same no matter where the care was received.

Recommendations for Further Study

Based upon the findings and conclusions of the study, the following recommendations for further research are made:

1. Revision of the questionnaire be performed by placing the first question dealing with over-all care last and placing the next seven questions before the first question. Revision of the scale should also be performed by reversing the attitude extremes in every other question in this manner:

   a. Were you made physically comfortable?

   Absolutely Dissatisfied _____ Completely Satisfied

   b. Were you given confidence?

   Completely Satisfied _____ Absolutely Dissatisfied

   Subsequent to the revision, a study should be done to compare the present questionnaire and scale with the revision.

2. Matrix correlations be run with the present data or in future studies to determine the nature of the relationships between the specific factors tested, testing the relationship of each question to every other question as opposed to just testing the relationship of each question to the question dealing with over-all care.

3. Institute a study that looks more specifically at the problems of communication with the patient in the emergency department setting, including conveying confidence and sympathetic understanding at a time of stress.

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APPENDIX A

CORRESPONDENCE

March 10, 1968

Dr. D. James Manning
Associate Professor
Marketing Department
Portland State College
Portland, Oregon

Dear Dr. Manning,

I have studied your recent doctoral dissertation entitled "An Illustration of the Application and Efficacy of Attitude Measurement as Emexplified in an Empirical Market Research Study" and I believe the scale you developed in your study could easily be adapted to my contemplated study which I will be doing for my master's thesis.

I would like to have your permission to use your scale and also would greatly appreciate having the opportunity to discuss my study with you. I am enclosing a rough draft of my proposal for this study and would appreciate your comments regarding it.

Very truly yours,

Donna Buchanan Schantz, R. N.

DBS:ws

Enc.

PORTLAND STATE COLLEGE
P. O. Box 751 Portland, Oregon 97207 226-7271
School of Business Administration Finance-Law Department

March 15, 1968

Mrs. Donna Buchanan Schantz
2215 S. W. 84th Avenue
Portland, Oregon 97225

Dear Mrs. Schantz:

I am delighted by your interest in my "market profile scale" as a basis for testing feelings of satisfaction or dissatisfaction of patients who have received emergency care in the local hospitals.

I believe that you will be able to adapt the scale to your study, and you certainly have my permission to use it. I would also be pleased to talk to you about your study.

Very truly yours,

D. James Manning
Associate Professor

dh

April 5, 1968

Mr. Walter Bain
Assistant Administrator
Emanuel Hospital
2801 North Gantenbein
Portland, Oregon

Dear Mr. Bain,

In partial fulfillment of requirements for a Master of Science at the University of Oregon School of Nursing, I am undertaking a follow-up study of two-hundred patients concerning the Emergency Room care they received at four metropolitan hospitals. In order to accomplish this study I need your cooperation and assistance, since I intend to mail a single questionnaire to each of fifty patients, chosen at random, who have been treated in the emergency room of each of the four hospitals. Neither the patient's name nor the hospital involved will be mentioned in the study. A mutually satisfactory date will be arranged for coming to Emauel Hospital to get the names and addresses of the patients, and I believe this can be completed in less than two hours.

Upon completion of the study, copies of the report will be placed in the library at the University of Oregon Medical School.

Yours sincerely,

Donna L. Schantz
2215 SW 84th Avenue
Portland, Oregon 97225

Donna Schantz is a regularly enrolled graduate student at the University of Oregon School of Nursing. Any assistance you can offer her which will help her to complete her study will be greatly appreciated.

Lucile Gregerson
Thesis Adviser

April 9, 1968

Mr. James Sauer, Jr.
Assistant Administrator
Providence Hospital
700 N. E. 47th
Portland, Oregon

Dear Mr. Sauer,

In partial fulfillment of requirements for a Master of Science at the University of Oregon School of Nursing, I am undertaking a follow-up study of two-hundred patients concerning the Emergency Room care they received at four metropolitan hospitals. In order to accomplish this study I need your cooperation and assistance, since I intend to mail a single questionnaire to each of fifty patients, chosen at random, who have been treated in the emergency room of each of the four hospitals. Neither the patient's name nor the hospital involved will be mentioned in the study. A mutually satisfactory date will be arranged for coming to Providence Hospital to get the names and addresses of the patients, and I believe this can be completed in less than two hours.

Upon completion of the study, copies of the report will be placed in the library at the University of Oregon Medical School.

Yours sincerely,

Donna L. Schantz
2215 SW 84th Avenue
Portland, Oregon 97225

Donna Schantz is a regularly enrolled graduate student at the University of Oregon School of Nursing. Any assistance you can offer her which will help her to complete her study will be greatly appreciated.

Lucile Gregerson
Thesis Adviser

April 9, 1968

Mrs. Ruth Wiens
Director of Nursing
St. Vincent Hospital
2447 N. W. Westover Road
Portland, Oregon

Dear Mrs. Wiens,

In partial fulfillment of requirements for a Master of Science at the University of Oregon School of Nursing, I am undertaking a follow-up study of two-hundred patients concerning the Emergency Room care they received at four metropolitan hospitals. In order to accomplish this study I need your cooperation and assistance, since I intend to mail a single questionnaire to each of fifty patients, chosen at random, who have been treated in the emergency room of each of the four hospitals. Neither the patient's name nor the hospital involved will be mentioned in the study. A mutally satisfactory date will be arranged for coming to St. Vincent Hospital to get the names and addresses of the patients, and I believe this can be completed in less than two hours.

Upon completion of the study, copies of the report will be placed in the library at the University of Oregon Medical School.

Yours sincerely,

Donna L. Schantz
2215 SW 84th Avenue
Portland, Oregon 97225

Donna Schantz is a regularly enrolled graduate student at the University of Oregon School of Nursing. Any assistance you can offer her which will help her to complete her study will be greatly appreciated.

Lucile Gregerson
Thesis Adviser

April 9, 1968

Miss Dorothy Davy
Director of Nursing Service
Good Samaritan Hospital and Medical Center
1015 N. W. 22nd Avenue
Portland, Oregon 97210

Dear Miss Davy,

In partial fulfillment of requirements for a Master of Science at the University of Oregon School of Nursing, I am undertaking a follow-up study of two-hundred patients concerning the Emergency Room care they received at four metropolitan hospitals. In order to accomplish this study I need your cooperation and assistance, since I intend to mail a single questionnaire to each of fifty patients, chosen at random, who have been treated in the emergency room of each of the four hospitals. Neither the patient's name nor the hospital involved will be mentioned in the study. A mutually satisfactory date will be arranged for coming to Good Samaritan Hospital to get the names and addresses of the patients, and I believe this can be completed in less than two hours.

Upon completion of the study, copies of the report will be placed in the library of the University of Oregon Medical School.

Yours sincerely,

Donna L. Schantz
2215 SW 84th Avenue
Portland, Oregon 97225

Donna Schantz is a regularly enrolled graduate student at the University of Oregon School of Nursing. Any assistance you can offer her which will help her to complete her study will be greatly appreciated.

Lucile Gregerson
Thesis Adviser

April 10, 1968

Dr. Jarvis Gould
Associate Medical Director
Multnomah Hospital
3171 SW Sam Jackson Park Road
Portland, Oregon

Dear Dr. Gould,

In partial fulfillment of requirements for a Master of Science at the University of Oregon School of Nursing, I am undertaking a follow-up study of two hundred patients concerning the Emergency Room care they received at four metropolitan hospitals. In order to accomplish this study I need your cooperation and assistance, since I hope to use Multnomah Hospital for my pilot study and need to send a single questionnaire to each of fifty patients, chosen at random, who have been treated in the emergency room at Multnomah. This is the same thing that I will be doing in my final study when I intend to mail a single questionnaire to each of fifty patients, chosen at random, who have been treated in the emergency room of each of four hospitals.

A mutually satisfactory date will be arranged for my coming to Multnomah to get the names and addresses of the patients, and I believe this can be completed in less than two hours. Neither the patient's name nor the hospital involved will be mentioned in the study.

Upon completion of the study, copies of the report will be placed in the library at the University of Oregon Medical School.

Yours sincerely,

Donna L. Schantz
2215 SW 84th Avenue
Portland, Oregon 97225

Donna Schantz is a regularly enrolled graduate student at the University of Oregon School of Nursing. Any assistance you can offer her which will help her to complete her study will be greatly appreciated.

Lucile Gregerson
Thesis Adviser

June 28, 1968

Mr. James Sauer, Jr.
Assistant Administrator
Providence Hospital
700 N. E. 47th
Portland, Oregon

Dear Mr. Sauer,

I am enclosing a copy of the questionnaire I will be using for my contemplated research study on Emergency Room Care.

I am presently conducting a pilot study at the Multnomah County Hospital and expect to begin my final study in approximately two weeks, at which time I will contact you.

Yours sincerely,

Donna L. Schantz, R. N.

DLS:mw
Encl.

April 10, 1968

Mr. Fred Weatherly
6214 Northeast Willow
Portland, Oregon

Dear Mr. Weatherly,

It has been brought to my attention that you might be willing to help me with the electronic data processing of my study which deals with the expression of feelings of satisfaction or dissatisfaction with emergency department care in four of our local hospitals. It is my understanding that you are familiar with the market profile scale used by Dr. Manning and that you are also familiar with the programming of this type of data. I would greatly appreciate it if you could help me and could make the computer available for my study.

Very truly yours,

Donna Buchanan Schantz, R. N.

DBS:ws

April 17, 1968

Mrs. Donna B. Schantz
2215 SW 84th Avenue
Portland, Oregon 97225

Dear Mrs. Schantz,

Thank you for your letter of April 10th regarding your study dealing with patient satisfaction as expressed by the marking of a questionnaire. I reviewed the proposal you enclosed and found it quite interesting. I am familiar with the Manning scale and the program for processing the data through the IBM computer. I would be very pleased to discuss these matters with you, and I believe you will have no great difficulty with the adaption of this program to your study.

I am quite positive that we will be able to make the computer available to you as the actual running time required will not be very long. If you would give me a call, we can set up a convenient time for you to come in and see just how the computer operates. I am sure you will find it fascinating, and certainly it will greatly help with the statistical analysis of the raw data.

Yours truly,

Fred Weatherly
6214 Northeast Willow
Portland, Oregon

FW:am

APPENDIX B

INSTRUMENT FOR DATA COLLECTION

Dear Patient,

As a graduate student at the University of Oregon School of Nursing, I am doing research on emergency room treatment. Since you have recently received such treatment, your completion of the following questionnaire would be of real value to me. Would you please answer the eight questions presented. If you choose not to answer, would you please return this questionnaire to me anyway. A stamped, self-addressed envelope is enclosed for your convenience. Neither your name nor the hospital involved will be mentioned in the research study.

Thank you,

Donna B. Schantz, R. N.

For each of the questions below, mark a vertical line / at the point on the line between the two extremes which best represents your attitude, opinion, or feeling.

A mark in the center of the line indicates no opinion at all. The nearer each end you mark is an indication of the strength of your opinion.

1. Was the overall care satisfactory? (were you generally pleased by the treatment from the time you arrived until you left the emergency room?)

   Absolutely Dissatisfied _____ Completely Satisfied

2. Were you made physically comfortable? (Were the facilities, furniture, lighting, temperature, etc., in the waiting room and treatment room such as to make you feel comfortable under the circumstances?)

   Absolutely Dissatisfied _____ Completely Satisfied

3. Were you given confidence? (Were you assured help was on the way?)

Absolutely Dissatisfied _____ Completely Satisfied

4. Was the service performed in a skillful manner? (Did the doctor, nurse, and others who helped you appear to know exactly what they were doing at all times?)

Absolutely Dissatisfied _____ Completely Satisfied

5. Was the nurse sympathetic? (Was the nurse helpful, courteous, friendly and understanding?)

Absolutely Dissatisfied _____ Completely Satisfied

6. Was there sufficient communication? (Were you given an explanation of what was wrong with you and of what would be done for you?)

Absolutely Dissatisfied _____ Completely Satisfied

7. Was the service prompt? (Was the treatment performed in a quick and efficient manner under the circumstances?)

Absolutely Dissatisfied _____ Completely Satisfied

8. Was the record-keeping handled well? (Was the paper work handled with a minimum of red tape and inconvenience?)

Absolutely Dissatisfied _____ Completely Satisfied

APPENDIX C

PILOT STUDY DATA

Pilot Study Summary Sheet

1	2	3	4	5	6	7	8	9	10	Question total	Number
4	3	2	2					2	20	33	1
1		1	2	1	1	2		1	24	33	2
5	1			2				3	22	33	3
4	1	2		1		2		2	21	33	4
3	1			2	1			2	24	33	5
5	2	2	1	1	1			2	19	33	6
5	1	2	1	1	1	2	1	3	16	33	7
2		1	2	2		1	3	3	19	33	8
										264	

CORRELATION MATRIX

QUESTION # 1

		LOW	MEDIUM	HIGH	TOTAL	
	LOW	3		1	4	
QUESTION # 2	MEDIUM	1		1	2	
	HIGH	7		20	27	
	TOTAL	11		22	33	TOTAL

CORRELATION MATRIX

QUESTION # 1

		LOW	MEDIUM	HIGH	TOTAL	
	LOW	5		1	6	
QUESTION #3	MEDIUM	1		1	2	
	HIGH	5		20	25	
	TOTAL	11		22	33	TOTAL

CORRELATION MATRIX

QUESTION # 1

		LOW	MEDIUM	HIGH	TOTAL	
	LOW	6		1	7	
QUESTION # 4	MEDIUM	1			1	
	HIGH	4		21	25	
	TOTAL	11		22	33	TOTAL

CORRELATION MATRIX

QUESTION # 1

		LOW	MEDIUM	HIGH	TOTAL	
	LOW	3		1	4	
QUESTION # 5	MEDIUM	2		1	3	
	HIGH	6		20	26	
	TOTAL	11		22	33	TOTAL

CORRELATION MATRIX

QUESTION # 1

		LOW	MEDIUM	HIGH	TOTAL	
	LOW	7		3	10	
QUESTION # 6	MEDIUM	2			2	
	HIGH	2		19	21	
	TOTAL	11		22	33	TOTAL

CORRELATION MATRIX

QUESTION # 1

		LOW	MEDIUM	HIGH	TOTAL	
	LOW	7		2	9	
QUESTION # 7	MEDIUM	1		1	2	
	HIGH	3		19	22	
	TOTAL	11		22	33	TOTAL

CORRELATION MATRIX

QUESTION # 1

		LOW	MEDIUM	HIGH	TOTAL	
	LOW	3		2	5	
QUESTION # 8	MEDIUM	1		1	2	
	HIGH	7		19	26	
	TOTAL	11		22	33	TOTAL

APPENDIX D

RAW DATA FOR

CROSS-CORRELATION MATRICES

CORRELATION MATRIX

QUESTION #1

		LOW	MEDIUM	HIGH	TOTAL	
	LOW	8			8	
QUESTION #2	MEDIUM	4	6	2	12	
	HIGH	6	5	101	112	
	TOTAL	18	11	103	132	TOTAL

CORRELATION MATRIX

QUESTION #1

		LOW	MEDIUM	HIGH	TOTAL	
	LOW	12	3	2	17	
QUESTION #3	MEDIUM	3	4	6	13	
	HIGH	3	4	95	102	
	TOTAL	18	11	103	132	TOTAL

CORRELATION MATRIX

QUESTION #1

		LOW	MEDIUM	HIGH	TOTAL	
	LOW	9	2	3	14	
QUESTION #4	MEDIUM	3	2	2	7	
	HIGH	6	7	98	111	
	TOTAL	18	11	103	132	TOTAL

CORRELATION MATRIX

QUESTION #1

		LOW	MEDIUM	HIGH	TOTAL	
	LOW	10	2	1	13	
QUESTION #5	MEDIUM	4	2	5	11	
	HIGH	4	7	97	108	
	TOTAL	18	11	103	132	TOTAL

CORRELATION MATRIX

QUESTION #1

		LOW	MEDIUM	HIGH	TOTAL	
	LOW	10	2	8	20	
QUESTION #6	MEDIUM	2	3	5	10	
	HIGH	6	6	90	102	
	TOTAL	18	11	103	132	TOTAL

CORRELATION MATRIX

QUESTION #1

		LOW	MEDIUM	HIGH	TOTAL	
	LOW	12	4	5	21	
QUESTION #7	MEDIUM		1	6	7	
	HIGH	6	6	92	104	
	TOTAL	18	11	103	132	TOTAL

CORRELATION MATRIX

QUESTION #1

		LOW	MEDIUM	HIGH	TOTAL	
	LOW	10	1	3	14	
QUESTION #8	MEDIUM	2	2	7	11	
	HIGH	6	8	93	107	
	TOTAL	18	11	103	132	TOTAL

AN ABSTRACT OF THE THESIS OF

DONNA BUCHANAN SCHANTZ

For the MASTER OF SCIENCE IN NURSING EDUCATION

Date of receiving this degree: June 12, 1969

Title: FOLLOW UP STUDY OF 132 ADULT PATIENTS CONCERNING THE EMERGENCY DEPARTMENT CARE THEY RECEIVED AT FOUR METROPOLITAN HOSPITALS

Approved: [redacted]
(Associate Professor in Charge of Thesis)

This study was a descriptive survey directed toward identifying the attitudes of outpatients who had previously received emergency care in emergency departments in four metropolitan hospitals.

The study was limited to 132 patients who had been treated in the emergency departments of these hospitals during the same one week period. Data were obtained through the use of the Manning scale as adapted to a questionnaire containing eight questions dealing with various factors relating to the care received and asking for expressions of satisfaction or dissatisfaction.

Findings

On the basis of the data obtained from the respondents to the questionnaire, it appeared the respondents had expressed general feelings of satisfaction with the over-all care received. The findings indicated that there was a significant relationship between the patients' feelings regarding their physical comfort, regarding their being given confidence, regarding the service being performed skillfully, regarding the nurse being sympathetic, regarding there being sufficient communication, regarding the promptness of the service, and regarding the handling of the record-keeping and their feelings regarding their over-all care. There was no significant difference between the feelings of the patients of the four different hospitals.

It had been hypothesized that the over-all reaction of outpatients who had received emergency treatment would be that of general dissatisfaction with the care received, and that none of the factors mentioned above would have any significant relationship to their feelings regarding their over-all care. The findings indicated general feelings of satisfaction and significant relationships between these factors and the feelings as to over-all care. Accordingly, the null hypotheses were rejected.

It had been further hypothesized that there would be no significant difference between the responses of the patients of each of the

four hospitals. The findings indicated that there was no significant difference and this hypothesis was accepted.

Conclusions

The limited population precludes widespread generalizations, but the following conclusions are made from this study.

1. The Manning Scale, as adapted to this study, provided a useful tool for eliciting the attitudes of outpatients who had previously received emergency department care. The scale allowed for a two-dimensional measurement of both direction and intensity of feeling regarding satisfaction of care and the results obtained were appropriate for statistical analysis.
2. In general, the expressed feelings of the patients who responded to the questionnaire indicated feelings of satisfaction not only with the over-all care received, but also with the specific factors tested, i.e., physical facilities of the emergency department, the skillfulness of the personnel, the promptness of the service, and the communication with the patient.
3. The computed chi-square values indicated that there was a significant relationship between the patients' feelings as to each of the specific factors tested and their feelings as to

their over-all care. The computed gamma values indicated that the degrees of association between their feelings as to the specific factors tested and their feelings as to their over-all care were very high.

4. In general, it did not make any difference in which of the four hospitals the patient had received his care with regard to his expressed feelings regarding his care as the result was approximately the same no matter where the care was received.

Recommendations for Further Study

Based upon the findings and conclusions of the study, the following recommendations for further study are made:

1. That a revision of the questionnaire be performed by placing the first question dealing with over-all care last and placing the next seven questions before the first question. Revision of the scale should also be performed by reversing the attitude extremes in every other question. Subsequent to the revision, a study should be done to compare the present questionnaire with the revision.
2. That matrix correlations be run with the present data or in future studies to determine the nature of the relationships between the specific factors tested, testing the relationship

of each question to every other question as opposed to just testing the relationship of each question to the question dealing with over-all care.

3. That a study be instituted that looks more specifically at the problems of communication with the patient in the emergency department setting, including conveying confidence and sympathetic understanding at a time of stress.

Typed by Barbara Glenn