Portland State University

PDXScholar

Dissertations and Theses

Dissertations and Theses

1991

The relationship of patients' perceptions of physicians' communication style to patient satisfaction

Lisa Diane Abramson
Portland State University

Follow this and additional works at: https://pdxscholar.library.pdx.edu/open_access_etds

Part of the [Health Communication Commons](#)

Let us know how access to this document benefits you.

Recommended Citation

Abramson, Lisa Diane, "The relationship of patients' perceptions of physicians' communication style to patient satisfaction" (1991). *Dissertations and Theses*. Paper 4121.
<https://doi.org/10.15760/etd.6004>

This Thesis is brought to you for free and open access. It has been accepted for inclusion in Dissertations and Theses by an authorized administrator of PDXScholar. Please contact us if we can make this document more accessible: pdxscholar@pdx.edu.

AN ABSTRACT OF THE THESIS OF Lisa Diane Abramson for the
Master of Science in Speech Communication presented November
5, 1991.

Title: The Relationship of Patients' Perceptions of
Physicians' Communication Style to Patient
Satisfaction.

APPROVED BY THE MEMBERS OF THE THESIS COMMITTEE:

Peter Ehrenhaus, Chair

Theodore G. Grove

Devorah Lieberman /

Arthur Terry /

This thesis examines the relationship between physician
communication style and patient satisfaction in the diagnostic
medical interview. Patient satisfaction is a critical issue
for health care organizations today. Health care
organizations are coping with the recruitment and maintenance
of patient consumers in a competitive and costly market.

The literature indicates that effective communication between the physician and the patient is important to patient satisfaction. The physician needs to structure the medical visit in order to acquire medical information and, at the same time, invite communication with patients to determine their concerns and needs. Patient satisfaction may ensue if the patient perceives the physician as possessing a positive communication style.

Pettegrew (1977) identified seven salient characteristics of a therapeutic communicator style. These variables, identified in his Therapeutic Communicator Style Measure (TCSM), are labeled: attentive, friendly, dominant, communicator image, impression leaving, relaxed and contentious. The physician is a therapeutic communicator if s/he communicates as a helper in a therapeutic context.

This thesis tested two hypotheses: 1) There will be a significant positive association between perceived physician communication and patient satisfaction; and 2) There will be a significant association between the length of the physician-patient relationship and perceived physician communication style. Six research questions looked at various aspect of Pettegrew's (1977) communication style construct and its relationship to patient satisfaction, congruency between perceptions of patients and physicians about the physicians' communication style, physician-patient relational history, and additional factors affecting patient satisfaction.

Data were gathered in the Family Practice Clinic at Oregon Health Sciences University. Data were gathered from 20 physicians and 108 patients immediately following diagnostic medical interviews. Patients completed three scales and provided personal demographic data. The Therapeutic Communicator Style Measure (TCSM) asked patients to rate their physician's communication style. The Physician-Patient Communication Satisfaction Inventory (PPCSI) asked patients to rate their satisfaction with the visit, and the Physician Attractiveness Rating Scale (PARS) asked patients to rate their physician's attractiveness. In addition, questions were completed regarding patients' age and education level, length of relationship with their doctor, length of their wait to see the doctor, and length of the medical visit. Physicians were asked to complete general and specific TCSMs to rate their own communication style.

Data were analyzed by a combination of Pearson Product Moment Correlation Coefficients, Partial Correlation Coefficients, Stepwise Multiple Regression and five Analyses of Variance (ANOVAs). The magnitude of partial correlations was markedly reduced from those of the bivariate correlations. This pattern held true in subsample analyses as well. The strongest predictors of patient satisfaction were the physician's communication style variables of attentiveness, dominance and communicator image. Congruency of perceptions between physicians and patients was very low. Only five of

nineteen items resulted in statistically significant positive associations. Satisfaction was not found to be a function of education, relationship length, or patient age. Similarly, the length of the patients's wait to see the physician and the length of the medical visit did not produce significant effects.

The implications of these and other findings suggest that physician communication style is not a significant factor in patient satisfaction with this particular patient population. The fact that the majority of patients were from lower socioeconomic background may have contributed to the failure to support the hypothesis. With this population, physician attractiveness was a more significant factor in patient satisfaction than was communicator style.

Recommendations for future studies include data collection at medical institutions that provide services to patients with predominantly higher socioeconomic brackets. These patients may be more interested in motivational factors such as the respect and attentiveness that the physician gives to them when providing their health care.

THE RELATIONSHIP OF PATIENTS' PERCEPTIONS OF
PHYSICIANS' COMMUNICATION STYLE TO PATIENT SATISFACTION

by

LISA DIANE ABRAMSON

A thesis submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE
in
SPEECH COMMUNICATION

Portland State University
1991

TO THE OFFICE OF GRADUATE STUDIES:

The members of the Committee approve the thesis of Lisa Diane Abramson presented November 5, 1991.

Peter Ehrenhaus, Chair

Theodore G. Grove

Devorah Lieberman

Arthur Terry *f*

APPROVED

Theodore G. Grove, Chair, Department of Speech Communication

C. William Savery, Interim Vice Provost for Graduate Studies
and Research

ACKNOWLEDGEMENTS

I would like to express my appreciation and gratitude toward my committee, Peter Ehrenhaus, Ted Grove, and Devorah Lieberman, for their commitment to and assistance with this thesis. Ted was a marvel at teaching me the elusive machinations of statistics. His gusto in our weekly summer sessions was infectious. And Devorah provided me with valuable insights into health care organizations. I am especially indebted to Peter for his tireless enthusiasm, unparalleled patience, and continuous belief in me, during the past year. He not only inspired me to ask questions about communication issues that were thought-provoking but gave me direction in pursuit of the answers.

I am also grateful to Pat and Eileen in the Speech Communication Department for their patience and support as I continually bombarded them with questions and pleas for help. They were godsend.

Lastly, this project would not have been possible without the ceaseless support of my husband, Brian, my brother-in-law, David, my friends; who listened to my frustrations and shared my determination to see this project to its completion.

TABLE OF CONTENTS

	PAGE
ACKNOWLEDGEMENTS	iii
LIST OF TABLES	vii
CHAPTER	
I PATIENT SATISFACTION AND PHYSICIAN COMMUNICATION	1
Introduction	1
II REVIEW OF THE LITERATURE	9
The Therapeutic Communicator Style Construct	10
Patient's Perceptions of Physicians' Communicator Style	13
Physician and Patient Satisfaction	14
Goals of Patient Care	16
Perceiving Effective Physician Communication	17
Theoretical Framework	21
Factors Affecting Costs and Rewards in The Physician-Patient Exchange	25
Statement of the Hypotheses	26
Statement, Rationales, and Assumptions of the Research Questions	27
III METHODOLOGY	32
Procedures	32
Subjects	33

	Data Collection	34
	Selection of the Physicians	35
	Instrumentation	36
	Pretesting/Preliminary Procedures	41
	Pretesting/Pilot Study	41
	Testing of the Hypotheses	42
IV	RESULTS	46
	Physicians Communication Style, Patient Satisfaction and Attraction	46
	Relational History and Patient's Perception of Physicians' Communication Style	47
	Perceived Communication Style of the Physician	47
	Attraction and Satisfaction	49
	Satisfaction, Attraction and Communication Style Variables	49
	Congruency of Perceptions between Physicians and Patients	51
V	DISCUSSION AND CONCLUSION	56
	Statistical Findings	56
	The Association Between Physician Communication Style, Patient Satisfaction and Attraction	62
	Relational History and Patients' Perceptions of Physicians Communication Style	65
	Perceived Communication Style of the Physician	67
	Effects of Education, Relationship Length and Patient Age on Patient Satisfaction	69

Effects of Waiting Time on Patient Satisfaction	70
Effects of the Length of the Medical Visit on Patient Satisfaction	71
Congruency of Perceptions Between Physician and Patient on the Physician's Communication Style	72
Limitations of the Study	74
Future Directions	76
REFERENCES	80
APPENDICES	
A PATIENT COVER LETTER	85
B PHYSICIAN COVER LETTER	87
C MODIFIED QUESTIONS OF THE THERAPEUTIC COMMUNICATOR STYLE MEASURE (TCSM)	89
D THE PATIENT'S THERAPEUTIC COMMUNICATOR STYLE MEASURE (TCSM)	94
E THE PHYSICIAN-PATIENT COMMUNICATION SATISFACTION INVENTORY (PPCSI)	99
F SCORING KEY FOR THE PPCSI	102
G THE PHYSICIAN ATTRACTIVENESS RATING SCALE (PARS)	104
H THE INSTRUCTOR RATING SCALE	106
I THE PHYSICIAN'S GENERAL THERAPEUTIC COMMUNICATOR STYLE MEASURE (TCSM)	109
J THE PHYSICIAN'S SPECIFIC THERAPEUTIC COMMUNICATOR STYLE MEASURE (TCSM)	113

LIST OF TABLES

	PAGE
I Association of Style with Satisfaction With and Without Controlling for Global Attraction	48
II Multiple Regression Analysis of Patient Satisfaction with Physician Communication Style Variables	50
III Bivariate & Partial Correlations of Satisfaction with the Seven Style Variables and Attraction .	51
IV Effects of Education, Relationship Length and Patient Age on Patient Satisfaction(n=108)	52
V Effects of Education, Relationship Length and Patient Age on Patient Satisfaction for Short Patient Waiting Time (n=70)	52
VI Effects of Education, Relationship Length and Patient Age on Patient Satisfaction for Long Patient Waiting Time (n=38)	53
VII Effects of Education, Relationship Length and Patient Age on Patient Satisfaction for Short Visit Time (n=33)	53

VIII	Effects of Education, Relationship Length and Patient Age on Patient Satisfaction for Long Visit Time (n=74)	54
IX	Congruency of Perceptions Between Physician and Patient on Physician Communication Style .	55

CHAPTER I

PATIENT SATISFACTION AND PHYSICIAN COMMUNICATION

INTRODUCTION

The purpose of this thesis is to examine the relationship between physician communication style and patient satisfaction in the diagnostic medical interview. Patient satisfaction is a multifaceted concept which incorporates affective, cognitive and behavioral components. The affective dimension of the physician-patient relationship includes how much patients feel accepted, feel comfortable to disclose, and believe they are being taken seriously. The cognitive dimension includes the belief that communication with the physician has resulted in more knowledge about one's condition. The behavioral dimension includes the satisfaction with physicians' approaches in the examination and their ability to treat the patient's condition (Burgoon, Pfau, Parrott, Birk, Coker, & Burgoon, 1987).

Although patient satisfaction is broadly defined by Burgeon et al(1987), Arntson (1985) defines more specifically that patient satisfaction is simply a measurement of how well the physician fulfills the patient's expectations in the medical interview. The patient's expectations are of interest in this thesis because they are potentially the most important

concern to the health care organization. Health care providers can more readily identify the issues that are most important to the patient if they focus on the patient's perceptions and expectations for the medical interview.

The issue of patient-physician communication is timely due to the competitive and costly market of health care in the United States. Health care organizations have responded by attempting to lower medical care costs while offering quality services. These responses are a result of the competition for alternative delivery systems in the health care sector (Greenberg, 1978). University teaching hospitals are an example of this more accessible type of health care organization. The physician's ability to satisfy the patient's socioemotional and medical needs are essential components of health care delivery objectives. Research suggests that the physician's communication style is instrumental to achieving patient satisfaction. Kreps and Thornton (1984) concluded that human communication in health care can help improve levels of satisfaction patients and physicians have with their health care relationships.

Kreps (1988) defines recurrent problems in health communication research focusing on the multi-dimensional construct of the physician's communication competence. Problems that occur with faulty physician communication are: 1) low patient compliance; 2) miscommunication and misinformation by the physician; 3) physician insensitivity;

4) unrealistic and unfulfilled patient expectations; and 5) dissatisfaction with health care on both sides.

Patient dissatisfaction with health care has led researchers to examine how patients view physicians' communication. Consequently; patient perceptions appear to be a focal point of study in the patient-physician interaction. Hawes (1972) discovered that certain verbal behaviors of both parties tended to inhibit the interaction, if the behaviors did not give psychological or physiological information that was necessary to make effective decisions regarding the patient's treatment. This emphasizes the need to examine which communicative behaviors facilitate the medical interaction.

Significance of the Problem

There is a difference between the patient's perceptions and the physician's self-perceptions of communication style (Street & Wienann, 1988). These authors concluded that congruency between the perceptions of both parties was vital to the development and maintenance of an effective relationship. A potential problem occurs, then, when there are significant incongruencies in perceptions. Communication may be misinterpreted by both parties, causing confusion, and dissatisfaction. Consequently, the problem of communication between the two parties warrants further investigation. The communication between the physician and the patient in the medical visit is critical to the viability of the HMO and

other health care organizations that are competing for patient dollars. Patients from lower socioeconomic backgrounds certainly affect that revenue. Ben-Sira (1980) confirmed that the physician's affective mode of delivery determined the patient's judgment of the quality of the treatment. This judgment, in turn, determined the patient's satisfaction. He also found that this was particularly important for patients of lower socioeconomic backgrounds. In light of Ben-Sira's rationale of the therapeutic process in his 1976 study, patients with lower education levels have a greater need for emotional support with the medical treatment.

The indigent patient similarly comprises the majority of clinical clientele in the university or teaching hospital setting such as the Oregon Health Sciences University (OHSU). OHSU, in the last fiscal year, obtained 37% of their total revenue from non-sponsored (uninsured) and medicaid patients (OHSU Financial Statement, June 1990).

Both the growth of the competitive health care market, and the growth of the indigent patient population contribute to defining the character of the patient-physician interaction. These trends are important considerations when health communication researchers examine the relationship of the provider and the consumer.

Statement of the Problem

The problem of doctor-patient communication exists primarily within the context of the medical visit. The patient-physician interaction provides the basis for exploring the effects of communication on patient satisfaction in the health care organization.

Today's health care organizations, for the most part, have modified their characteristics by encouraging patient involvement in the health care process. Patients have slowly taken an ever-increasing responsibility for their own health and health care (Kreps, 1988). This means that patients must rely on the physician, as well as themselves, to effectively communicate issues surrounding their health concerns.

Kreps (1988) states that effective communication can promote delivery of high quality health care while ineffective communication can lead to dissatisfaction with health care services, alienation between health care providers and consumers, and competition between health care providers.

There is more research needed in this area to discover how to facilitate effective communication for the physician which results in patient satisfaction and ultimately, cost-effective medical care. This model assumes a potential linear relationship between effective communication, patient satisfaction and cost-effective medical care; this thesis will address only the associations between effective communication and patient satisfaction.

It seems clear from the preceding literature review that if patients are satisfied with the medical interaction, they will be more likely to communicate openly about their medical concerns and express symptomatic complaints more readily. This would enable the physician to efficiently select appropriate procedures and services while avoiding unnecessary medical treatments. Effective and positive communication would facilitate the development of a satisfactory patient-physician relationship.

The communicative abilities of the physician is an area of the patient-physician relationship that has been widely researched. Certainly, the abilities of the patient have been called into question, (Kreps, 1990) but the scope of that focus is another complete research study.

Arntson (1985) suggests further demographics be included in future research: 1) the professional status of the provider; 2) the social status of the patient; and 3) the reason for the patient's visit. These suggestions are necessary in order to make generalizations from the research. This thesis will look at the socioeconomic background of the patient - their educational level - and the reason for the patient's visit. The patient's educational level and reason for the visit relate to the level of effective communication with the physician. The patient's educational and socioeconomic background have been noted by Ben-Sira (1980) to play a significant role in the sensitivity to the physician's

affective behavior. The patient's medical concern in the visit may also affect their perceptions and sensitivity to physician behavior. Consequently, it would be beneficial to look at how Arntson's demographic suggestions bear on the patient-physician interaction.

Finally, of direct significance to this thesis is Pettegrew's (1977) 51-item, 4-point Likert scale to define a therapeutic communicator, the Therapeutic Communicator Style Measure (TCSM). Eleven independent variables comprise this type of communicator: 1) dominant; 2) dramatic; 3) animated; 4) open; 5) contentious; 6) relaxed; 7) friendly; 8) attentive; 9) precise; 10) voice; and 11) impression leaving. The one dependent variable, communicator image, completes the TCSM scale. Three Rogerian variables were added later to make a total of 14 variables: 1) warmth; 2) accurate empathy; and 3) genuineness.

These characteristics of a therapeutic communicator have been shown to relate to positive therapeutic outcomes. Pettegrew studied the therapeutic encounter from a holistic perspective while noting the interdependent functioning in the therapeutic communicator style role as perceived by the therapist and the client in the encounter.

The term "therapeutic communicator" itself is a misleading concept. Pettegrew's TCSM was devised for psychotherapists but has been appropriated here for the

physician in this study. From here on it will be referred to as "physician communicator style."

Examining the Patient-Physician Interaction

In sum, this thesis seeks to examine the relationship between patient physician communication and patient satisfaction. This will be examined in a university hospital Family Practice clinic setting where patients will be given the TCSM, the Patient/Physician Communication Satisfaction Inventory (PPCSI) and the Physician Attractiveness Rating Scale (PARS) following their medical visit. The physicians will be given the TCSM for their general impressions of communication style and then a specific TCSM scale following the medical visit with each patient.

Examining the interaction in this way will enable us to describe relationships among patient-physician communication, perceptions of communication style and physician attractiveness, and patient satisfaction.

CHAPTER II

REVIEW OF THE LITERATURE

The literature linking physician communication and patient satisfaction is prolific in the journals of communication and medicine. The relationship is made both explicitly and implicitly. The effectiveness of the physician's communication is seen as the catalyst for changing the quality of the patient-physician interaction.

One of the most important contributions to the patient-physician interaction was Pettegrew's work in the communication field. Pettegrew (1977) investigated Norton's (1978) general communicator style construct to further a definition of *therapeutic* communicator style. By sampling 1700 college students to test the baseline on the general Communicator Style Measure (CSM) and sampling an additional 81 college students on a Therapeutic Communicator Style Measure (TCSM), Pettegrew was able to pinpoint the more salient characteristics distinctive to a therapeutic communicator.

In describing a therapeutic communicator, Pettegrew (1977) stated that this professional was one who could effectively communicate with his/her client. Therapeutic communication is the "verbal and paraverbal communicative transactions between a helper and a helpee which results in

the feeling of psychological (thoughts), emotional (feelings), and or physical (actions) relief by the helpee" (p. 596).

The successful therapeutic communicator adapts his/her style in certain salient ways to function in helping relationships (Pettegrew, 1977). The physician assumes this role in his/her helping context. S/he is a helper "whose influence is primarily exercised by words, acts, rituals which sufferer, healer, and - if there is one - group, participate jointly" (Frank, 1961, p. 3).

THE THERAPEUTIC COMMUNICATOR STYLE CONSTRUCT

Pettegrew identified fourteen characteristics of the therapeutic communicator style (i.e., positive physician communicator style). Eleven independent variables comprise the definition of this communicator style. They include:

1) dominant	8) attentive
2) dramatic	9) precise
3) animated	10) voice
4) open	11) impression leaving
5) contentious	12) warmth
6) relaxed	13) accurate empathy
7) friendly	14) genuiness

The last three are Rogerian (1951) variables that were added later to make a total of 14 variables. One dependent variable, communicator image, was used in his research design.

Pettegrew operationalized his variables in the following way: *Dominant* was defined as the tendency to dominate conversations. Here, the communicator takes complete charge of interpersonal interactions and has frequent verbal activity. *Dramatic* was defined as the degree of verbal animation, including voice inflection and rhythm. This refers to having picturesque speech or exaggerating when stressing a point. Here, the communicator strongly influences the helping interaction. *Animated* was defined as the degree of nonverbal animation (paralleling *dramatic's* verbal animation) or whether the communicator actively uses facial expressions, gestures and eye contact to structure his/her communication. *Open* is meant to indicate how readily the communicator verbally expresses feelings and emotions and is disclosive about personal ideas. *Contentious* (diametrically opposed to the *friendly* subconstruct) referred to the degree of argumentativeness with clients and the extent to which the communicator takes issue with the client's opinions. The client is challenged and provoked. *Relaxed* was defined as the degree of calm that the communicator possesses in either his/her voice or paraverbal activity and whether he/she reveals any nervous mannerisms or stays calm and collected. The degree of kindly interest and goodwill toward the client without expressing hostility defined *Friendly*. The communicator provides positive support for the client. *Attentive* referred to the degree to which the communicator

encourages their client, listens carefully and deliberately provides cues to the client such that the client knows that he/she is being listened to. *Precise* referred to the preciseness of the communication content that the communicator insists on and the accuracy of that content expected in the interaction. *Voice* was defined as the vocal characteristics of the communicator which included loudness, distinctiveness, and assertiveness. It is defined separately from the message communicated to the client. *Impression leaving* was the determination of whether a lasting impression was made on the clients as a result of the communicative stimuli which is presented in the helping encounter.

Rogarian values were defined as follows: *warmth*: how well interest is communicated along with a warm attitude and creating a non-threatening environment without imposing conditions on accepting the client's experience; *accurate empathy*: the ability to clarify and elaborate the client's feelings which is based on the communicator's *attentive* behavior; and *genuineness*: is the ability of the communicator to be himself/herself without projecting a professional facade.

Communicator image, the dependent variable, was defined as the ability to assume a helping role and be perceived as a "good" communicator. A communicator with this image is adept at communicating with the client regardless of the conversational topic (Pettegrew, 1977).

Pettegrew found that seven of these components were distinctive to a therapeutic communicator style (i.e., positive physician communicator style). These distinct components were: dominant, contentious, relaxed, attentive, precise, impression leaving and communicator image.

PATIENT'S PERCEPTIONS OF PHYSICIANS' COMMUNICATOR STYLE

Patients' perceptions of physicians' communicator style were examined by Foeller (1984). In her master's thesis, she interviewed patients to determine the extent to which patient satisfaction with patient-physician interaction was associated with the patient's perceptions of the quality of the medical care. Patients agreed on the identification of nine issues that were seen as contributors to their satisfaction or dissatisfaction with patient-physician communication. Foeller then formulated a measure based on Hecht's (1978) Interpersonal Communication Satisfaction Inventory (ICSI) entitled Physician-Patient Communication Satisfaction Inventory (PPCSI) based on the following consensual patient issues:

- A. Access to information.
- B. Ability to understand information.
- C. Participation in decisions concerning medical treatment.
- D. Access to the physician with sufficient time allotted to discuss patient needs and concerns.

- E. Patient perception that the physician understands his/her experience with illness or injuries.
- F. Patient perception that the physician genuinely cares about him/her.
- G. Freedom to disagree with treatment plans without fear of rejection or diminished quality of medical care.
- H. Perception that patient symptoms and concerns are taken seriously by the physician.
- I. Perception that the physician believes what the patient says (p. 18).

Foeller found that patient satisfaction with physician-patient communication was directly related to how the patient perceived the quality of medical care. She found that a strong positive relationship of .802 existed between patient communication satisfaction and the patient's perception of the quality of medical care. This confirmed her hypothesis that the more satisfied the patient was with his/her communication with the physician, the more satisfied he/she would be with the quality of the medical care.

PHYSICIAN AND PATIENT SATISFACTION

Physician satisfaction is addressed as well in the literature. In his critique of the research of the role of relational communication in health care, Kreps (1988) addressed the need for developing the communication

competencies for both physicians and their patients. He lamented the deficit of quality therapeutic communication within the health care context and the resultant problems. Some of these deficits include the inability to develop effective doctor-patient communication relationships, the misinterpretation of relational needs, the inability to communicate empathy, and relational dominance (p. 346-347). Patient dissatisfaction with their medical treatment and the inability of physicians to pinpoint patient dissatisfaction are among the resultant problems.

Kreps (1988) noted that past research on the relational aspects of health care "clearly demonstrate that the effectiveness of interpersonal communication relationships established between health care providers and consumers have a major influence on the level of success of health care treatment" (p. 351). He concluded that most communication studies on health care relationships have failed to create strategies for improving these relationships and "relieving these relational deficiencies" (p. 347).

Moreover, Bates and Moore (1975) similarly identified the existence of health care problems including miscommunication, unrealistic expectations and insensitivity as culprits of "widespread dissatisfaction with health care practice by both consumers and practitioners (sic)" (cited in Kreps & Thornton, 1984, p. 8). Ultimately, this dissatisfaction may cause professional burnout and therefore, ineffective delivery of

health care systems. Kreps & Thornton (1984) emphasize that the basis for these health care problems is linked to human communication. Consequently, human communication becomes the focus for improving satisfaction between the doctor and the patient.

GOALS OF PATIENT CARE

In the health care organization, effective communication help providers adapt to the needs of their patients. Communication also serves to coordinate the various means by which patient care goals are met. Costello and Pettegrew, (1979) noted that health care organizations serve different functions than other organizations, therefore, the integration of these healthcare components via communication is essential to quality patient care. These specific communication goals are accomplished by appreciating and understanding the multiple components that are involved in patient care.

Patient and physician goal management are both dependent on the communicative abilities of each party. Kreps (1988) asserted that human communication processes "enable health care consumers and providers to gather and interpret pertinent information for accomplishing health care delivery objectives" (p. 351). However, the *physician's* ability to satisfy the patient's socioemotional and medical needs are essential to that delivery. Moreover, the physician needs to become adept at eliciting patient concerns. Wallston and Wallston (1978)

stated that patients have their own ideas, concerns, and expectations regarding their care and they often fail to express them at the most propitious moment - the medical visit. Consequently, it is the physician's ability to communicate effectively that will permit the attainment of patient and physician goals. Pendleton (1985) found that physicians need to fulfill five roles when having patient contact in order to successfully communicate and manage both goals. They include: 1) defining the problem; 2) making management decisions to solve the problem; 3) informing the patient; 4) preventing the occurrence of problems; and 5) providing care and support to maintain the patient's well-being. These roles depict the responsibility of a successful and effective communicator (pp. 100-101).

PERCEIVING EFFECTIVE PHYSICIAN COMMUNICATION

Research suggests that the physician's communication style is instrumental to achieving patient satisfaction. Kreps and Thornton (1984) concluded that human communication in health care can help improve the satisfaction that patients and physicians have with their health care relationships. More recently, Burgoon and Burgoon (1990), in their research on compliance-gaining strategies in health care, concluded that dissatisfaction is an avoidable inhibitor to obtaining medical care. Thus, it appears that when patients are satisfied consequently, medical care will be improved. The

quality of communication is a likely contributing factor. It seems apparent then that efforts toward improving patient satisfaction via improved communication is a fruitful proposition.

Patient satisfaction has also been linked to physician attractiveness. Young (1980) found that the physician's likability or attractiveness, as perceived by the patient, affects the patient's satisfaction and, similarly, affects their perceptions of their physician's communication style. Patients were found to have a significantly greater willingness to disclose and discuss problems with their physician if their physician was perceived as being attractive.

Interpersonal attraction, according to Berscheid and Walster (1978), is defined as "an individual's tendency or predisposition to evaluate another person or symbol of the other person in a positive (or negative) way" (pp. 4-5). Patients' perceptions are seemingly more critical to determining positive outcomes. These perceptions also significantly affect their satisfaction.

In their study examining relationships between physicians' self-perceptions of communication style during medical visits and patients' perceptions of the physicians' communication style, Street and Wiemann (1988) found that there was a notable difference between the two viewpoints. Twenty-five physicians and 354 patients in a large medical

clinic were given questionnaires to complete following their medical visit regarding their perceptions of the interaction. Interestingly enough, the researchers found that the physician's self-perceptions *were not* related to the patient's satisfaction but that the patient's perceptions were related to their own reported satisfaction of the medical care received. Patient satisfaction was positively related to patients' perceptions of physicians' ability to be interpersonally involved and to be expressive. Satisfaction was negatively related to their perception of the physician's dominance. In other words, the outcome of patient satisfaction is due to positive physician communication style as perceived by the patient.

The benefits of teaching effective communication techniques to physicians have been stressed by Hall, Roter and Rand (1981) in strengthening the physician-patient relationship. Perceptions by the patient assessing the physician's communication style, they speculated, could possibly shorten the medical visit as well as lower the cost. In their study to discover patterns of physician-patient communication by analyzing tape recordings of fifty patient-physician interactions in routine medical visits, these researchers found that:

it is the judgment of the physician's ability to relate to patients in a warm, sympathetic, and personal manner that is often cited as the leading factor in a patient's satisfaction with the medical visit. (pp. 18-19)

This affective behavior, or socioemotional aspect of care, was found most likely to be associated with the patient's attitudes and behaviors.

Although teaching effective communication does not necessarily insure patient satisfaction, levels of satisfaction may be improved within the patient-physician relationship (Kreps and Thornton, 1984). In their text on health communication, Kreps and Thornton emphasize that improving the level of therapeutic communication between the patient and the physician can help patients improve their health care. Additionally, this type of communication (exemplified by Pettegrew), can assist in the patient's growth and increase not only their interpersonal relationships but their own self-satisfaction (pp. 103-104).

In Ben-Sira's study (1976) in which he interviewed approximately 1900 patients in their homes following a medical visit, physicians affective behavior were found to be a "decisive factor in the crystallization of the layman's satisfaction" (p. 3) with physician responses. In a later study, Ben-Sira (1980) again interviewed over 500 patients looking at the instrumental and affective components of the physician's behavior and the physician's emotional involvement or concern about the patient's health. The frequently cited results of this study in the literature confirm that Ben-Sira's findings are quite significant: the physician's affective mode of delivery determines the patient's judgment

of the quality of the treatments. This judgment, in turn, determined the patient's satisfaction.

THEORETICAL FRAMEWORK

Physician-Patient Interaction From a Social Exchange Theory Perspective

The work in physician-patient interaction is essentially a-theoretical. It is problem-driven. The literature on communication outcomes has focused primarily on patient satisfaction in relation to the physician's behavior. These substantive findings have not been grounded in theory. However, Social Exchange Theory provides a unifying framework to explain the dynamics of the physician-patient relationship in light of the outcome of patient satisfaction.

Specifically, Social Exchange Theory provides a perspective for evaluating how people construe their relationship in terms of costs and rewards. It presumes a rational model of the individual, who engages in careful assessment of relational inputs and outputs. As applied to dyadic interaction, this theory states that two people provide each other with objects and activities in a voluntary transference (Roloff, 1981).

The interactants choose from a repertoire of behaviors when they came together in a relationship. Their behavior is valued according to the relative costs and rewards, or outcomes. These outcomes can be material (improved health) or social (the gratification and pleasures associated with the

exchange). The costs are associated with behaviors that inhibit the interactant (Littlejohn, 1978). Each person's action in the interaction yields a certain "goodness of outcome," based on the costs and the rewards' and each person must value the mutual activity above a particular level in order to maintain the relationship (Thibaut & Kelley, 1959).

Two types of consequences derive from interaction. *Exogenous* consequences are external to the relationship and would result from the action whether or not another person were involved. They revolve around the individual's specific needs and values. *Endogenous* consequences are a result of the coupling of actions of both persons in the interaction. Endogenous rewards are, therefore, dependent on an established relationship (Thibaut & Kelley, 1959).

Social Exchange Theory provides further explanation with the concepts of comparison level and comparison level of alternatives. The comparison level (CL) is a measure of attraction that is used to judge another person. CL is the level above which the person is satisfied with the relationship. When comparing the relationship to another one, the person may realize that the individual may find that the person is more desirable than any of the alternatives.

The comparison level of alternatives (CL_{alt}) is the lowest level of outcomes that the person will tolerate when considering alternatives (Thibaut & Kelley, 1959). It is a measure of dependency. An individual who is more dependent on

another person will tend to tolerate those undesirable traits longer.

The physician provides the patient with medical advice, medical treatment, and subsequent relief from pain and illness. The patient provides the physician with money to receive those services as well as intrinsic rewards. Since intrinsic rewards are purely subjective we cannot *truly* define them in this context. But, let us presume that the physician may be intrinsically rewarded for helping his/her patient get better.

The physician and the patient assess the relative costs and rewards or outcomes. The physician will determine whether the time spent with the patient will help the patient and whether the patient will be satisfied with his/her medical care, assuming this is important to the patient. The patient will determine whether the costs of paying for services and coming to see the physician are worthwhile. The reward is patient satisfaction and relief from illness.

Exogenous consequences for the patient would be their satisfaction with their medical care. Satisfaction may be an outcome external to the medical visit - the patient's perceptions of their physician's communicator style. The endogenous rewards for the patient would be an appropriate diagnosis and treatment and, satisfaction with the medical interaction. Endogenous costs, as a result of the interaction, might cause the patient to terminate the

relationship if he/she found that their level of adequate satisfaction was not met. Thibaut and Kelley (1959) state:

whatever the nature of the early exchanges between A and B, they will voluntarily continue their association only if the experienced outcomes (or inferred but as yet unexperienced outcomes) are found to be adequate. (pp. 20-21)

The patient's voluntary continuance in association with their physician is, therefore, the result of their satisfaction. Consequently, the longer their criteria for satisfaction are met, the longer they will continue the relationship.

The patient may not like his/her physician and may be dissatisfied to a certain degree but will still continue to see the physician because the physician is still acceptable in comparison to other physicians that the patient must choose. This is significant in the university hospital where the patient's choices are limited in the selection of a physician. The patient will have a certain threshold of dissatisfaction. If that level is exceeded then the patient will seek another physician for medical care. The patient is no longer dependent on that physician for satisfaction in that medical interaction.

In sum, Social Exchange Theory accounts for the physician-patient interaction with their focus on the costs and rewards of the social exchange. This theory provides a useful perspective from which to examine these relational communication partners.

FACTORS AFFECTING COSTS AND REWARDS
IN THE PHYSICIAN-PATIENT EXCHANGE

The costs and rewards, in the context of the medical interaction, are affected by the effectiveness of the communication between the two parties. The problem of communication between the physician and the patient in the medical visit relates to previous research that has evaluated dissatisfaction with medical care. The communicative abilities of the physician is one element of the relationship that has been a continual focus of study. Certainly, the abilities of the patient have been called into question but the scope of that focus is another complete research study.

Arntson (1985) suggests further demographics be included in future research: 1) the professional status of the provider (the years in practice or newness in a particular medical field); 2) the social status of the patient (socioeconomic background); and 3) the reason for the patient's visit (diagnosis and/or nature of illness). He suggests that these are necessary additions in order to make reasonable generalizations from the research. These demographic factors might affect the costs and rewards for both interactants. The physician's professional status may play a part in his/her rewards. Perhaps, the physician with a lengthy medical career obtains rewards from the trust s/he receives from patients. Similarly, the patient's social status may have a bearing on how s/he perceives certain costs and rewards. The waiting

time at the doctor's office may be a more costly issue for the patient that can't miss a few hours of pay to see the doctor because every penny must go to feed his/her family. Third, the nature of a patient's condition could certainly color his/her perceptions of what the exchange will bring in terms of costs and rewards. The doctor may seem to be offering more rewards to a patient that has made an excellent recovery from a debilitating illness than from an improvement from a sinus infection. Demographics such as these may provide additional insight into the physician-patient exchange. The educational and age level of the patient will be examined here as two indicators of socioeconomic background.

STATEMENT OF THE HYPOTHESES

This thesis will test two hypotheses. As the literature indicates, effective communication between the physician and the patient is important to patient satisfaction. In this formal relationship, the physician needs to structure the medical visit in order to acquire medical information and at the same time invite communication with the patient to determine their concerns and needs. This structuring will lead to patient satisfaction if the patient perceives the physician as possessing the skills of a positive communicator style. Consequently, the first hypothesis of this thesis is:

H₁: There will be a significant positive association between perceived physician communication and patient satisfaction.

The endogenous reward or outcome of satisfaction will be a result of the positive perceptions. Moreover, patients who weigh the comparison level for alternatives and choose to stay with their physician will continue to maintain a long-term relationship and will have more positive perceptions and concomitant communication satisfaction.

Social Exchange Theory also refers to another endogenous reward of significance, asserting that affiliation is a function of the length of the relationship (Rolloff, 1981, p. 77). Consequently:

H₂: There will be a significant association between the length of the physician-patient relationship and perceived physician communication style.

STATEMENT, RATIONALES, AND ASSUMPTIONS OF THE RESEARCH QUESTIONS

Based on previous research that has been done on the significance of the physician's communication style to patient satisfaction, this thesis will explore a series of research questions:

1. How significant are the various components of the physician's communication style construct to patient satisfaction? In other words, which are the strongest predictors of patient satisfaction?

It appears that Pettegrew (1977) doesn't give us any instruction in that significance. The various components of

the physician's communicator style construct will be significant to patient's satisfaction due to distinctiveness in a helping relationship in comparison to a general communicator style (Pettegrew, 1977).

2. What is the relative importance of Pettegrew's physician communicator style components in relation to patient satisfaction?

Pettegrew specifies the salient features of this style but does not note the impact on patient satisfaction. *Communicator image, impression leaving, dominance, friendliness, and relaxed* are the most salient components of this communicator style (Pettegrew, 1977).

3. To what extent do these components need to be perceived by the patient to ensure patient satisfaction?

Similarly, the physician communicator style variables that are salient in the helping relationship, are not viewed in tandem with patient satisfaction by Pettegrew. Hall, Roter and Rand (1981), Ben-Sira (1976) and others simply suggest that a positive affective mode of delivery is needed to produce positive perceptions and patient satisfaction. All the salient components of the physician's communicator style do not need to be perceived for patient satisfaction. However, a less effective therapeutic outcome (Pettegrew, 1977) or less patient satisfaction will be found.

4. What is the relationship between the physician's self-perceptions of his/her communicator style and the patient's perceptions of the physician's communicator style?

Street and Wiemann (1988) concluded that there is little congruency between the perceptions of both parties. This will be tested once more and to note the effects of incongruence on patient satisfaction. Street and Wiemann (1988) state that there is no relationship between physician and patient perceptions and that congruency of perceptions is not a factor in satisfaction. However, in the interest of training physicians effective communication styles, examining the congruency of both perceptions may help physicians improve their skills. In addition, it might be interesting to look at the level of congruency in conjunction with the length of the physician-patient relationship. If there are incongruencies between patient and physician perceptions, then there may still be a significant outcome of patient satisfaction.

5. What is the relationship between the length of time the patient has to wait to see their physician and their satisfaction?

The length of time that the patient has to wait to see his/her physician may not necessarily interfere with their satisfaction.

6. What is the relationship between the length of the actual medical visit and the patient's satisfaction?

There may be a relationship between the length of the actual medical visit and the patient's satisfaction. The patient may feel that the physician cares more about him/her if the physician spends more time with them. On the other hand, the physician may be in and out of the patient's room and actually be spending less time with the patient. These last two questions have not been answered in previous literature reviewed.

Kreps' (1988) contention that satisfaction can be attained through effective communication suggests that we need to find out which factors the patient sees as being essential to the physician's communication style. Arntson (1985) asserts that fulfillment of patients' expectations in the medical encounter need to be addressed in order for satisfaction to occur. These expectations may be reflected in patients' perceptions of the physician's communication style. And, finally, Pettegrew (1977) emphasizes that certain salient features are employed by the therapist (or physician) in the helping relationship. The existence of seven distinct components of a positive physician communicator style (dominant, contentious, relaxed, attentive, precise, impression leaving and communicator image) in this relationship may not all occur in the medical encounter.

However, he found that these components were distinctive when compared to a general communicator style.

Answering these questions could significantly aid health care organizations, as well as their consumers (patients), in a broad spectrum of therapeutic contexts to realize appropriate, timely, cost-effective and satisfactory health care. The major thrust of this research is to improve patient care by discovering positive physician communication techniques that will enable the development of an effective patient-physician relationship as well as reduce visit time and costs for health care organizations.

Chapter III will present the methodology used to investigate the hypotheses and research questions as stated and addressed in this chapter.

CHAPTER III

METHODOLOGY

This chapter presents the procedures used for data collection and data analysis, the subjects studied and the instrumentation used to test the hypotheses and research questions.

PROCEDURES

Immediately following their appointments with their physicians, patients were asked to rate their perceptions of their physician's communication style using a modified Therapeutic Communicator Style Measure (TCSM). They were also asked to rate their satisfaction with the medical visit with the Patient-Physician Communication Satisfaction Inventory (PPCSI). Finally, they were asked to rate the physician's likability using the Physician Attractiveness Rating Scale (PARS). Patients were also asked to fill out demographic data. These instruments were completed in order to test the first hypothesis. The PARS was employed here to account for the effect of global attraction on this hypothesis.

Similarly, immediately following the appointment, the physicians were asked to rate their self-perceptions of their own communication style using the TCSM. This was done in

order to determine the degree of congruency between perceptions of both physician and patient.

SUBJECTS

The subjects were patients at the Oregon Health Sciences University in the Family Practice Clinic. Patients are typically seen in this outpatient facility for various concerns, but primarily are seen for prenatal and postnatal care. The majority of patients are young pregnant women seeking obstetrical care and young children seeking pediatric care. Other typical family practice clinic patients are seen for routine and follow-up visits for various conditions. One hundred and eight patients were surveyed in this clinical setting. Eighty-three patients, or 31% of the patients, were female; 20 patients, or 19%, were male.

The pool of physician subjects was comprised of university faculty, visiting faculty, interns and second and third year residents. The twenty participating physicians consisted of 4 faculty physicians, one visiting faculty physician, 5 third-year residents, 8 second-year residents and 2 interns or first-year residents. Seven out of the twenty physicians, or 35%, were female.

This family practice clinic serves as a Primary Care Organization (PCO) for 70% of their clients. As their PCO, patients must be exclusively seen in this clinic for primary care and be referred by the clinic physician for additional or

specialized care. Additionally, the majority of these clients are welfare recipients. Non-insured patients comprise 20% of the population and 10% are self-paying. This clientele represents a predominantly indigent population.

DATA COLLECTION

Following approval from Human Subject Committees at Oregon Health Science University and Portland State University, data were collected in the Family Practice Clinic for approximately seven weeks in May and June 1991. Patient subjects were chosen at various times during the weekday hours from the scheduled clinic appointments. Previously scheduled patients, as well as walk-in patients were surveyed either in the morning (9:00 - 11:30 a.m.), afternoon (1:30 - 4:30 p.m.) or evening (5:00 - 8:00 p.m.) clinics.

Each physician (faculty, visiting faculty, intern, and 2nd and 3rd year resident) was approached by the investigator regarding participation in the study prior to examining patients for that particular day. These physicians were asked to rate their general impressions of their communication style using the TCSM one time. Then, following each medical visit, they were asked to complete the specific TCSM based on each completed medical visit.

The investigator or two research assistants entered the examining room after the nurse obtained preliminary information and took patients' vitals such as temperature,

weight and blood pressure. Research assistants were trained for a short period on the method for approaching patients, gaining participation from subjects and collecting questionnaires. The patients were then introduced and provided with a brief explanation of the study. They were then asked if they would be interested in participating in the study. Approximately 85% of the patients approached agreed to participate. If patients wanted to know more about the study before electing to participate or if they agreed to participate, they were given a cover letter describing the scales to complete, their right to withdraw from the study, their right to choose not to answer any question and our assurance of complete anonymity (see Appendix A). The patients were told that the investigator or research assistant would return at the end of the visit and give them the instrument packet in the examining or waiting room, depending on whether the room was needed for another patient.

The physician was also given a cover letter delineating the same rights of participation and anonymity. (See Appendix B for sample.)

SELECTION OF THE PHYSICIANS

Physicians were selected based on the advice of the nursing staff. Nurses identified physicians that would be more agreeable and approachable to participating in the study than others. Eight physicians were obtained through nurse

referrals. The investigator obtained twelve additional physicians by making inquiries of interest to physicians that were in the clinic or by physicians volunteering to participate. Only one physician, who was approached in the latter group, declined to participate in the study.

INSTRUMENTATION

The questionnaire packet given to the patient included the condensed Therapeutic Communicator Style Measure (TCSM), the Physician-Patient Communication Satisfaction Inventory (PPCSI), the Physician Attractiveness Rating Scale (PARS), and questions on patient age and education levels and relational history between the physician and patient. In addition, measures were obtained on the length of patient waiting time preceding the visit, and on the length of the medical visit. (The patients' perceptions for waiting length and visit length may not be accurate or represent real time.) These were utilized to obtain a patient database in the Family Practice Clinic. The packets were compiled by placing the scales in six different orders to assure a variety of responses.

The Therapeutic Communicator Style Measure (TCSM)

A condensed version of Pettegrew's (1977) TCSM was used to assess the patient's perceptions of the physician's communicator style. The wording was modified in order to shorten the time needed to complete the instrument and to avoid duplication of questions. The TCSM was also tailored to

reflect the perceptions of the specific medical visit just completed. The original 51-item measurement was condensed to a 19-item measurement which focused on the seven salient characteristics of the therapeutic or positive physician communication style. The nineteen items were sufficient to adequately tap each of the variables of interest. Pettegrew's 5-point Likert scale was also simplified for better clarity (see Appendix C). Pilot testing was performed on the TCSM's wording. Comprehension was tested on 10 patients and 2 physicians and was revised before the actual scale was implemented.

Pettegrew (1977) described the TCSM as a measurement to determine:

the cognitive assessment by respondent of his or her self-perception of the way a specified helper verbally or paraverbally interacts with him or her to signal how literal meanings should be taken, filtered or understood in the helper's (therapeutic face-to-face) communication. (p. 597)

Construct validity and reliability were found in Norton's (1983) CSM, parent to TCSM, as well as in other studies that used his measure. Therefore, since Pettegrew found "configural comparisons" in both the general and therapeutic communicator style constructs, that validity is assumed present in the TCSM. The CSM's content validity has been accepted because of the self-report test.

The internal reliability of the CSM, bodes well for the TCSM as seen in the following construct figures: friendly (.37), animated (.56), attentive (.57), contentious (.65),

dramatic (.68), impression leaving (.69), relaxed (.71), communicator image (.72), and dominant (.82). "Except for the friendly (sic) subconstruct the reliabilities are good given the small number of items and short scale range" (Norton, 1978, p. 106, emphasis in original). These data were derived from Norton's 5-item measure with a 4-point scale (see Appendix D for condensed TCSM).

The Physician-Patient Communication Satisfaction Inventory (PPCSI)

The 18-question, 7-point Likert scale, the PPCSI, was the second scale utilized to measure the patient's satisfaction with the actual medical visit just encountered. This inventory was used to "obtain a quick check on patient communication satisfaction and perceived quality of medical care" (Foeller, 1984, p. 51). (See Appendix E for sample scale). The PPCSI was scored by Foeller's key (see Appendix F for scoring key).

The PPCSI, based on Hecht's Interpersonal Communication Satisfaction Inventory (ICSI) which was designed to assess general interpersonal communication satisfaction, was found to have high construct validity when the relationship between the two inventories was tested. A correlation of .89 ($n=151$) was found, indicative of a 79% common variance for the two measures based on that particular sample. The PPCSI and the ICSI were found to be mutually confirmatory in assessing patient satisfaction with physician/patient communication. A

high internal consistency reliability was found with a Chronbach's Alpha of .96 and standardized item Alpha at .96. The ICSI correlated with the PPCSI ($t=1.06$; $d.f.=148$; NS) supporting the convergent validity of the PPCSI (Foeller, 1984).

Hecht's ICSI was found to have high reliability coefficients. Reliability coefficients for the 16-items were (.86) for actual treatment, (.66) for recalled treatment, (.80) among friends, and (.73) among acquaintances. ICSI's high reliability and validity was found when it was used to measure satisfaction with actual or recalled, interpersonal communication in various social settings with a friend, acquaintance or stranger (Hecht, 1978).

The Physician Attractiveness Rating Scale (PARS)

The PARS was used to assess the attractiveness of the physician to the patient. This scale was used to generate partial correlations as a check on the patient perception/patient satisfaction relationship. This 9-point verbally anchored graphic rating scale was chosen to obtain a wide variation of ratings from respondents. The scale was created after a review of the measures in the social sciences literature failed to find an attractiveness rating scale appropriate to the present study. The language of the PARS was derived after examining the literature on attraction (see Appendix G).

Patzer (1985) used a bipolar rating method with a 7-point continuum to rate attraction. In his study on friendship formation, Duck (1973) used the continuum of "dislike" to "like very much" to rate attraction and Mahoney (1978) employed weak to strong liking for his attractiveness study.

To test the reliability of the PARS, undergraduate students in two Portland State University Speech Communication courses were asked to complete an Instructor Rating Scale, rating professors from each of three different college divisions: social sciences, sciences, and arts and letters. Ratings were again obtained after a two-week interval (see Appendix H). The reliability scores were relatively high with the Science instructors (.79), the Social Science instructors (.63), and the Arts and Letters instructors (.70). Those results indicate reliability was sufficient for the present study.

The Physician's Therapeutic Communicator Style Measure (TCSM)

All physicians were administered the 19-question, 5-point Likert scale, TCSM, to assess their self-perceptions of their communicator style. This scale was also a condensed version of Pettegrew's original scale. Two versions were given to the physician: one for a one-time only general impressions and the other for specific impressions based on the particular medical visit (see Appendices I and J for the two different TCSM's). Both patient and physician TCSMs were scored according to Pettegrew's suggestions. Scores ranged from 1 point for

"strongly disagree " to 5 points for "strongly agree" on all items except #5 where the scoring is reversed.

PRETESTING/PRELIMINARY PROCEDURES

Wording of the TCSM was simplified prior to the pilot study because of the abstractedness of questions. The investigator and the head of research in the Family Practice department revised wording to change this quality. As noted earlier in this chapter, the seven variables of communication style were tapped using fewer questions than the original measurement.

PRETESTING/PILOT STUDY

The measurement instruments for the patient were pretested in a pilot study prior to data collection. Ten patients were asked to complete the instrument packet and to inform the investigator if there were questions that were incomprehensible or difficult to answer. Two physicians were asked to complete their measurement instruments and note any questionable terms or problems with the questions being asked. All subjects in the pilot study were timed to determine the average length of time needed to complete the instrument packets. The average time to complete the packets was 8 minutes. This was a reasonable amount of time to ask of patients to participate in the study.

The physicians were able to complete the specific TCSM in less than 2 minutes which boded well for obtaining their participation in the study. Patients in the pilot study noted the need to simplify wording and clarify the meaning of particular questions. Physicians suggested some wording changes to clarify meaning for the physician and the patient. Modifications were made based on these suggestions.

TESTING OF THE HYPOTHESES

Hypotheses

- H₁: There will be a significant positive association between perceived physician communication and patient satisfaction.
- H₂: There will be a significant association between the length of the physician-patient relationship and perceived physician communication style.

Statistical Procedures

Pearson Product Moment Correlation Coefficients and companion partial coefficients were computed to test the directional Hypothesis #1. These were performed on the total sample and on each of the following subsamples with respect to gender: male physician/male patient dyads, male physician/female patient dyads, female physician/female patient dyads, female physician/male patient dyads, homogenous dyads only, heterogenous dyads only, male physician dyads only and female physician dyads only. And as follow-up to explore those associations, stepwise multiple regression examined how

the seven communicator style variables behaved as predictors of satisfaction. The stepwise multiple regression was chosen here to isolate a subset of the bivariate correlations of the seven predictor variables of patient satisfaction. The stepwise inclusion was the most appropriate method to assess an "optimal predictor equation" for the pre-set theoretically selected variables (Nie, Hull, Jenkins, Steinbrenner & Bent, 1975). The Statistical Package for the Social Sciences (SPSS) describes this step-wise solution as a forward inclusion that is "combined with the deletion of variables that no longer meet the pre-established criterion at each successive step" p. 345). The stepwise multiple regression identified the relative contribution of each communicator style variable.

Additional Data Analysis

Pearson Product Moment Correlation Coefficients were computed to determine the association between physician perceptions of their communication style (physician TCSM) with patient perceptions of the physician's communication style (patient TCSM). Pearson Product Moment Correlation Coefficients were also computed to determine the association between the patient-physician relational history and perceived physician communication style (TCSM). Bivariate and partial correlations were computed on the seven communication style variables and patient satisfaction. Additionally, five ANOVAs were computed to assess the effects education, relationship length and patient age on patient satisfaction. Education

consisted of two levels: 1) grade school through high school and 2) college through graduate school. Relationship lengths consisted of two levels; 1) Zero to 2 years and 2) more than 2 years. Patient age was broken down into five age levels: 1) 0-17 years; 2) 18-34 years; 3) 35-54 years; 4) 55-74 years and 5) 75-85+ years. These 2 x 2 x 5 analyses of variance were done on the entire sample and then were run again on four subsamples which included short versus long patient waiting time and short versus long physician visit time.

Results of the Statistical Procedures

Chapter IV will report the results of the statistical procedures in the following order:

1. Physician Communication Style, Patient Satisfaction and Attraction
2. Perceived Communication Style of the Physician and the Strongest Predictors of Patient Satisfaction
3. Relational History and Patients' Perceptions of Physicians' Communication Style
4. The Effects of Education, Relationship Length and Patient Age on Satisfaction
5. The Effects of Education, Relationship Length and Patient Age on Satisfaction for Short Patient Waiting Time
6. The Effects of Education, Relationship Length and Patient Age on Satisfaction for Long Patient Waiting Time

7. The Effects of Education, Relationship Length and Patient Age on Satisfaction for Short Visit Time
8. The Effects of Education, Relationship Length and Patient Age on satisfaction for Long Visit Time
9. Congruency of Perceptions Between Physicians and Patients

CHAPTER IV

RESULTS

PHYSICIAN COMMUNICATION STYLE, PATIENT SATISFACTION AND ATTRACTION

The primary interest here was in the association between patient satisfaction and physician communication style as perceived by the patient. However, in order to control for the likely interaction between those two variables and a third variable, global attraction of the patient for the physician, simple bivariate correlation coefficients on the primary variables of interest were complemented with partial correlation coefficients in which attraction was partialled out. In all cases, correlation coefficients between style and satisfaction dropped substantially from the bivariate to the partial correlation.

Partial correlations were significant with heterogeneous dyads when the physician was male and the patient was female, or when the physician was female and the patient was male. The partial correlation between male physician and female patient dyads was .273 ($p = .03$). Similarly, collapsing data across heterogeneous dyads, where the cases were either male and female or female and male, produced a correlation of .268 ($p = .03$).

Table I presents the simple bivariate and partial correlation coefficients obtained from the total sample and the various sub-samples identified in this study. As seen in Table I, the magnitude of partial correlations was substantially lower than the bivariate correlations; this pattern held true for the total sample and for all sub-sample comparisons. Only one sub-sample (female physician/male patient dyads) did not permit analysis because of insufficient sample size. Consequently, data were analyzed on the total sample and on seven sub-samples. With one exception, direction of association remained positive despite the decline in magnitudes. Only in partialing out attraction in the male physician/male patient dyads did an inverse relationship appear ($r = -.210$).

RELATIONAL HISTORY AND PATIENTS' PERCEPTIONS OF PHYSICIANS' COMMUNICATION STYLE

The length of the physician-patient relationship had no bearing on patients' perceptions of physicians' communication style. An insignificant correlation of .060 ($p = .268$) was found on the total sample. Further investigation of sub-sample data was not warranted.

PERCEIVED COMMUNICATION STYLE OF THE PHYSICIAN

The stepwise multiple regression analysis, shown in Table II, determined that three variables of positive physician communication style were significant predictors of patient

TABLE I
ASSOCIATION OF STYLE WITH SATISFACTION
WITH AND WITHOUT CONTROLLING
FOR GLOBAL ATTRACTION

Sample	Bivariate (p*) Correlation	Partial (p*) Correlation	Cases
All	.400 (.000)	.121 (.107)	105
Male/Male	.495 (.018)	-.210 (.209)	15
Male/Female	.385 (.003)	.273 (.030)	46
Female/Female	.355 (.013)	.147 (.190)	36
Female/Male	--- (---)	--- (---)	2
Male/Male & Female/Female	.414 (.001)	.025 (.428)	54
Male/Female & Female/Male	.382 (.003)	.268 (.030)	48
Male/Male & Male/Female	.428 (.000)	.111 (.188)	64
Female/Female & Female/Male	.351 (.012)	.143 (.189)	38

p* = p value

satisfaction. They were at *attentiveness*, *dominance*, and *communicator image*. As a group, the association of these three variables with satisfaction was indexed by a multiple correlation coefficient of .612, accounting for over 37% of the variance ($R^2 = .375$) while leaving 62.5% unexplained variance. Consequently, these variables are a weak set of predictors (Guilford, 1954). A negative relationship was found between perceived physician dominance and patient satisfaction at $-.287$. Excluded predictor variables from the equation were *friendly*, *impression leaving*, *relaxed*, and

contentious. These variables together accounted for less than 5% of the total variance.

Table II also shows the contributions of the style variables to the stepwise multiple regression. Only the first three variables contributed significantly to the equation, using .05 as the default value. None of the other four variables, when added, achieved that level, and were thus omitted from the equation.

ATTRACTION AND SATISFACTION

A Pearson Product Moment Correlation coefficient was computed on attraction and satisfaction. As expected, there was a high correlation of .566 ($p = .000$) on the total 108 sample (see Table III). Here we have evidence of attraction sharing 32% of its variance with satisfaction.

SATISFACTION, ATTRACTION AND COMMUNICATOR STYLE VARIABLES

Attraction was found to have the same effect on the relationship between the seven communicator style variables and satisfaction as it did upon the relationship between satisfaction and the various physician-patient samples. These style variables were found to be strongly influenced by the affective character of attraction. The significant decrease from bivariate to partial correlations provides strong support for the positive relationship between attraction and patient satisfaction (see Table III).

TABLE II

MULTIPLE REGRESSION ANALYSIS OF PATIENT SATISFACTION
WITH PHYSICIAN COMMUNICATION STYLE VARIABLES

Criterion Variable	Predictor					P Value
	Beta Weight	Multiple R	R Square	Standard Error	Added Explained Variance	
Attentive	.383	.506	.256	11.941	---	.000
Dominant	-.287	.585	.343	11.274	9%	.000
Communicator Image	.232	.612	.375	11.051	3%	.000

TABLE III

BIVARIATE AND PARTIAL CORRELATIONS OF SATISFACTION WITH
THE SEVEN STYLE VARIABLES AND ATTRACTION

Criterion Variable	Bivariate (p value) Correlation	Partial (p value) Correlation
Attraction	.566 (.000)	---
Attentive	.506 (.000)	.219 (.012)
Communicator Image	.473 (.000)	.234 (.008)
Impression Leaving	.404 (.000)	.190 (.025)
Friendly	.365 (.000)	.135 (.082)
Contentious	.272 (.002)	.143 (.071)
Relaxed	.231 (.008)	.111 (.127)
Dominant	-.247 (.005)	-.287 (.001)

The Effects of Education, Relationship Length and Patient Age on Satisfaction

Taking the whole 108 dyad sample, satisfaction was not found to be a causal function of education, relationship length, or patient age (see Table IV). Similarly for the long and short visiting time samples and the long and short physician visit samples, no significant effects were obtained for education, relationship length, or patient age (see Tables V, VI, VII and VIII).

CONGRUENCY OF PERCEPTIONS BETWEEN PHYSICIANS AND PATIENTS

Congruency of perceptions between physicians and patients was also very low. Table IX shows that only five of the nineteen items resulted in a statistically significant

TABLE IV

EFFECTS OF EDUCATION, RELATIONSHIP LENGTH AND
PATIENT AGE ON PATIENT SATISFACTION
(N = 108)

Source of Variation	Sum of Squares	DF	Mean Square	F	Significance of F
Education	286.156	1	286.156	1.491	.225
Relationship Length	1.378	1	1.378	.007	.933
Patient Age	552.635	4	138.159	.720	.580
Explained	916.856	6	152.809	.796	---
Residual	19387.552	101	191.956	---	---
TOTAL	20304.407	107	189.761	---	---

TABLE V

EFFECTS OF EDUCATION, RELATIONSHIP LENGTH AND
PATIENT AGE ON PATIENT SATISFACTION
FOR SHORT PATIENT WAITING TIME
(N = 70)

Source of Variation	Sum of Squares	DF	Mean Square	F	Significance of F
Education	132.956	1	132.956	.797	.375
Relationship Length	76.113	1	76.113	.456	.502
Patient Age	641.956	4	160.489	.962	.435
Explained	862.725	6	143.788	.862	.528
Residual	10511.118	63	166.843	---	---
TOTAL	11373.843	69	164.838	---	---

positive association between the two sets of perceptions ($p \leq .05$). The TCSM items that produced the strongest associations

TABLE VI

EFFECTS OF EDUCATION, RELATIONSHIP LENGTH AND PATIENT AGE ON
PATIENT SATISFACTION FOR LONG PATIENT WAITING TIME
(N = 38)

Source of Variation	Sum of Squares	DF	Mean Square	F	Significance of F
Education	84.675	1	84.675	.334	.567
Relationship Length	248.236	1	248.236	.979	.330
Patient Age	181.638	1	60.546	.239	.869
Explained	553.784	5	110.757	.437	.819
Residual	8111.611	32	253.488	---	---
TOTAL	8665.395	37	234.200	---	---

TABLE VII

EFFECTS OF EDUCATION, RELATIONSHIP LENGTH AND
PATIENT AGE ON PATIENT SATISFACTION
FOR SHORT VISIT TIME
(N = 33)

Source of Variation	Sum of Squares	DF	Mean Square	F	Significance of F
Education	33.337	1	33.337	.131	.720
Relationship Length	207.554	1	207.554	.816	.374
Patient Age	1472.939	3	490.980	1.931	.148
Explained	1541.381	5	308.276	1.212	.330
Residual	6865.589	27	254.281	---	---
TOTAL	8406.970	32	262.718	---	---

between physician and patient responses were: Items 1, 13, 14, 15 and 19 (see Appendices D and I). Yet of those five, the strongest association was only $r = .265$ ($p = .003$), a

TABLE VIII
EFFECTS OF EDUCATION, RELATIONSHIP LENGTH AND
AND PATIENT AGE ON PATIENT SATISFACTION
FOR LONG VISIT TIME
(N = 74)

Source of Variation	Sum of Squares	DF	Mean Square	F	Significance of F
Education	195.975	1	195.975	1.396	.242
Relationship Length	11.555	1	11.555	.082	.775
Patient Age	478.891	4	119.723	.853	.497
Explained	774.059	6	129.010	.919	.487
Residual	9402.820	67	140.341	---	---
TOTAL	10176.878	73	139.409	---	---

relatively moderate association (see Appendices D and I). Correlations ranged from .265 to .158.

Bivariate correlations for the other 14 items ranged between .000 and .150 and five of those were negative. Additionally, congruency of perceptions was examined in terms of the seven communication style variables: friendly, impression leaving, communicator image, relaxed, attentive, contentious and dominant. Statistically significant levels of congruence were achieved for items reflecting the variables *friendly*, *dominant*, *attentiveness*, and *communicator image* (see Table IX).

TABLE IX

CONGRUENCY OF PERCEPTIONS BETWEEN PHYSICIAN AND PATIENT
ON PHYSICIAN COMMUNICATION STYLE

	Correlation (p value)	Variable Tapped
Item #1	.202 * (.018)	Friendly
Item #2	.051	Impression Leaving
Item #3	-.016	Friendly
Item #4	.008	Communicator Image
Item #5	.101	Relaxed
Item #6	-.038	Relaxed
Item #7	-.058	Attentive
Item #8	.136	Contentious
Item #9	-.007	Attentive
Item #10	.084	Attentive
Item #11	.109	Contentious
Item #12	.133	Dominant
Item #13	.164 * (.045)	Dominant
Item #14	.265 * (.003)	Friendly
Item #15	.158 * (.051)	Attentive
Item #16	-.050	Contentious
Item #17	.000	Impression Leaving
Item #18	.150	Attentive
Item #19	.195 * (.021)	Communicator Image

* $P \leq .05$

CHAPTER V

DISCUSSION AND CONCLUSION

This chapter will present a discussion of the two hypotheses and research questions in light of the statistical findings reported in Chapter IV. Conclusions will be drawn, followed by the identification of the study's limitations and the proposed directions for future study.

STATISTICAL FINDINGS

Only marginal support was found for Hypothesis #1. Satisfaction was associated with patients' perceptions of positive physician communication style only in select sub-samples. Instead, attraction was found to account for any noteworthy relationship between perception of communication style and patient satisfaction.

No support was found for Hypothesis #2. Relational history between the physician and the patient also had no bearing on patients' perceptions of physicians' communication style.

Research Questions #1, #2, and #3 examined related aspects of the significance, and relative importance, of the communicator style variables to patient satisfaction. Three physician communicator style variables were found to be

predictors of patient satisfaction. They were *attentiveness*, *dominance*, *communicator image*. A negative relationship was found between perceived physician dominance and patient satisfaction. These findings suggest that certain style variables contribute instrumentally to patient satisfaction, even though patient satisfaction can be largely accounted for by attraction, alone.

Research Question #4 explained the relationship between the physician's self-perceptions of his/her communication style and the patient's perceptions of the physician's communication style. The relationship between physicians' self-perceptions and patients perceptions of the physician communication style was found to be very low. However, there is no reason to presume any relationship between perceptual congruence and patient satisfaction. These findings provided support to previous findings (Street & Wiemann, 1981) as cited in Research Question #4.

Research Question #5 examined the relationship between the length of time the patient had to wait to see the physician and patient satisfaction. No significant relationship was found.

Research question #6 examined the relationship between the length of the medical visit and the patient's satisfaction. This was also found to be a non-significant relationship. The length of the visit did not provide any greater likelihood of patient satisfaction.

Physician communication style was suspected to be an important issue in patient satisfaction. This was not borne out. In fact, the majority of the predictions made were not borne out. The failure to find empirical support seems puzzling, at first. However, the actual findings are amenable to explanation in terms of Social Exchange Theory. Specifically, I shall argue that the rationale originally developed did not adequately account for the particular nature of costs and rewards among the study's subject population. In developing this explanation, I shall also rely upon Herzberg's (1966) Motivation-Hygiene Theory.

Social Exchange Theory states that two people provide each other with objects and activities in a voluntary transference. The behavior in the relationship is valued according to the consequences of costs and rewards. The consequences of the relationship are either endogenous (i.e., based in the character of the relationship) or exogenous (i.e., based on the instrumental goods and services derived from the relationship). Herzberg (1966) asserted that the nature of human needs varies situationally. In some circumstances, a minimal level of need satisfaction is sufficient. This he calls hygiene needs. Certain situations will call for fulfilling basic or sustaining needs. In others, need satisfaction must be maximized. These are motivation needs where the situation will call for satisfying personal self-fulfillment.

Assumptions were made in the Hypotheses and Research Questions that the patient population in this study would consist of individuals who wanted to maximize their needs satisfaction and be focused on meeting those needs through endogenous rewards. In fact, quite the contrary was found. The subject population consisted of individuals who needed to fulfill only their basic needs, focusing only on the exogenous rewards of the medical interaction.

Rotating physicians, permanent staff physicians and student physicians were found in this clinic setting. Patients were mostly comprised of welfare mothers who were seeking prenatal care. The economic constraints on these patients contributed to the highly instrumental nature of the interactions on both parts. Patients and physicians met to fulfill basic medical care needs. Consequently, exogenous rewards were the consequences that were weighed. For these patients, patient satisfaction is an issue of satisfying a particular set of needs, as opposed to maximizing needs more broadly (i.e., endogenous rewards). Their needs were ones that were more basically met.

Herzberg's Motivation-Hygiene Theory (1966) provides explanation for the majority of these patients who were predominantly from lower socioeconomic backgrounds. Herzberg asserts that certain individuals may not have the motivational needs for developing a long-term relationship. In this case, their needs are already met at the hygiene level with their

basic medical care. The endogenous rewards of the longer-term interactions in this relationship, as stated in Social Exchange Theory, are not found to be stronger than shorter-term interactions. The endogenous rewards appear to be sought by motivation seekers as defined by Herzberg. Conversely, the exogenous rewards appear to be sought by individuals who want to satisfy hygiene needs. From this perspective we can find a closer assessment of what constitutes costs and rewards in the relationship. The *absence* of costs may be a more accurate measurement of the relationship for the patients in this setting.

Herzberg's theory provides an appropriate basis for the findings in this study. Hypothesis #1's findings that positive perceptions of physician communication style was not a strong predictor of patient satisfaction can be explained because style was not an important issue to the patients trying to satisfy hygiene needs. Communication style is more likely a concern of relationships in which the individual seeks endogenous rewards. The hygiene seekers look only to fulfill their basic medical needs which are found outside of the relationship, and thus which concern exogenous rewards.

Hypothesis #2's finding that relational history is not important to positive perceptions of physician communication style may be related to this particular setting. The physician-patient relationships in this context were of mostly short duration and the interactions were possibly only

instrumental meetings to provide and receive medical care (hygiene needs). These individuals may not look to develop a long-term relationship.

The incongruity of perceptions between physicians and patients might be an issue of physician communication style. Physicians may have the ability to engage in an instrumental relationship, and therefore, provide these particular patients with their exogenous rewards. These patients are no less satisfied with their care (even though there is little congruity of perceptions) because the physician has provided them with the necessary hygiene needs.

The length of patient waiting time did not affect satisfaction. The individuals in this study may be unaware or unconcerned with a long waiting time to see their doctor. Perhaps, if they never did see their doctor they would be less satisfied because of the absence of the exogenous rewards. Similarly, the length of the medical visit may not have been an issue for these patients. They may not be interested in the endogenous rewards of the physician's attentiveness and time spent in the visit. Perhaps, the development of a lasting relationship was not a priority.

Herzberg's theory (1966) provides a more viable explanation to the unsupported findings. Individuals wanting to satisfy hygiene needs look for exogenous rewards and individuals wanting to satisfy motivation needs look for endogenous rewards, as discussed in Social Exchange Theory.

These theories complement each other and offer a more appropriate assessment of the costs and rewards in these particular physician-patient exchanges.

THE ASSOCIATION BETWEEN PHYSICIAN COMMUNICATION STYLE, PATIENT SATISFACTION AND ATTRACTION

Hypothesis #1 predicted that patients who perceive more positive physician communication will have more satisfaction with their medical care. Patient satisfaction was found to be mildly associated with patients' perceptions of positive physician communication. However, associations were weaker when attraction was accounted for in the association. These together provide negligible support for Hypothesis #1. The absence of support for the hypothesis is particularly important when one considers that all previous research has simply explored bivariate relationships without controlling for attraction.

Looking at the results of the associations of perceived physician communication style, patient satisfaction and attraction, several patterns emerge that are interesting to note (see Table I). Relationships dropped markedly when controlling for attraction. The decline in the association between style and satisfaction was greatest in the homogeneous dyads: the male/male or female/female doctor-patient dyads. Reductions from the bivariate correlations to the partial correlations ranged from .025 to .414. The next decline occurred in the male physician dyads (i.e., male

physician/male patient and male physician/female patient). Those reductions ranged from .111 to .428. Female physician dyads (i.e., female physician/female patient and female physician/male patient) followed close behind, ranging from .143 to .351. The heterogeneous dyad (i.e., male physician/female patient and female physician/male patient) proved to have the least decline from the effects from the removal of attraction. Those reductions ranged from .268 to .382.

As noted in the Chapter IV, the male physician/male patient dyads changed from a positive to an inverse relationship from (.495 to -.210). This change in direction of relationship is of interest, although sub-sample size is not sufficient to make any strong claims. This finding may offer a hint of the gender differences in communication needs for this particular subject population in this hospital setting. But we should look at the implications cautiously. The endogenous rewards of communication style may not be an important issue to male patients.

As findings in Table I suggest, endogenous rewards appear to be very important for female patients. Communication style is an important issue. Characteristically, women desire more communication and are more focused than men on verbal exchange (Tannen, 1990). Popular sociological and psychological literature continually highlights the verbal nature of women and their need to discuss feelings and issues in order to

discover truths (Arliss, 1991; Tannen, 1990; Thorne & Henley, 1975). Consequently, in the female physician-female patient dyad, style is an important matter because this homogenous relationship is a reassuring one that offers endogenous rewards of satisfaction via the communication exchange.

It is interesting to point out that most physicians are male, and even though this fact is changing, it is still more common to find male physicians giving medical examinations. Therefore, the issue of gender differences in communication needs and its implications for endogenous rewards may be an important focus of future physician-patient interaction studies.

For female patients, style is not important when the physician is female. It was when the physician was male ($r = .273$, $p = .03$) that style was most important. For male patients, style was not an issue for satisfaction. But it is interesting to note that the correlation was negative ($r = -.210$, $p = .209$) suggesting that attention to style could even be an intrusion. This suggests that for female patients style is a socially significant factor because in male/female interactions there is generally an issue of the awareness of gender differences. This has implications for the social appropriateness of behavior in mixed gender relationships. There is an awareness of gender differences and certain social conventions are adhered to in these heterogeneous interactions where most of the patients are expectant mothers. This

interpretation is reasonable when you consider that in the same sex female dyads, style is not an issue and in the same sex male dyads style is not an issue. This suggests that a level of comfort in same sex dyads translates into a lessened concern for communicative appropriateness. In addition, style may be important for the mixed gender dyads in this study because the endogenous costs associated with inappropriate communicative behavior would hinder the satisfaction of hygiene needs. Therefore, the absence of appropriate communication style is a potential cost.

Attraction seems to be a very important variable to account for how communication style is associated with other outcome variables, such as patient satisfaction. This also seems to be a component of the endogenous rewards in the dyadic relationship. Strong support was found between attraction and patient satisfaction (see Table III), accounting for 32% of the variance in satisfaction by itself. Communication style was found to be only mildly associated with patient satisfaction once global attraction was accounted for in the data.

RELATIONAL HISTORY AND PATIENTS' PERCEPTIONS OF PHYSICIANS' COMMUNICATION STYLE

Hypothesis #2 predicted that the longer the relational history between the physician and the patient, the more positive perceptions of the physician's communication will be

found. This second hypothesis was not supported. Longer relational history was not associated with increasingly positive perceptions of the physicians' communication style. A non-significant correlation of .060 was found. This finding tells us that relational history has no bearing on how the patient perceives the physician's communication style. Again, the nature of patients' needs in this university hospital context may provide the explanation. Patients in this particular setting probably had not developed relationships with their physicians, regardless of the number of meetings they had had. Drawing upon Herzberg's Motivation-Hygiene Theory (1966), patients who seek medical care through university hospital may be individuals looking only to fulfill basic needs. The basic needs for the patient are limited to treating their medical ailments. Beyond those needs, the patient with only hygiene needs may have no need or interest in developing a relationship. In addition, the physician in this university hospital setting, may have been less interested in maintaining an ongoing relationship, especially in light of the fact of their relatively short-term residency. Faculty physicians, which were the minority of physician subjects, may be more interested in developing and maintaining that bond because they are more likely to have a longer commitment in this clinic setting than the residents.

PERCEIVED COMMUNICATION STYLE OF THE PHYSICIAN

Research Question #1 addressed the significance of the various physician communication style variables as predictors of patient satisfaction. The variables of attentiveness, dominance and communicator image were found to be the only predictors of patient satisfaction (see Table II). These findings suggest that patients tend to be more satisfied with their care if they perceive their doctor to be attentive and communicating appropriately.

As presented in Chapter II, Social Exchange Theory asserts that exogenous consequences are the costs and rewards instrumentally gained from the interaction. These consequences can be independent of the action and independent of the other person's involvement. Endogenous consequences, on the other hand, are a result of the interaction and are, therefore, dependent on an established relationship (Thibaut & Kelley, 1959). An individual weighs the costs and rewards externally and/or internally to the relationship and then determines whether their needs are sufficiently met.

The exogenous consequences of the relationship are weighed by the patient to measure satisfaction because they are the necessary conditions for this instrumental interaction (getting their particular medical treatment). These three variables were found to be the most necessary ingredients for satisfaction (goodness of outcome). The negative relationship between perceived physician dominance and patient satisfaction

suggests that patients are not content with doctors who dominate the conversation. The cost of not meeting those needs (exogenous consequences) may leave the patient less satisfied. S/he may also be considering the minimum standards of satisfaction (comparison level) in the relationship. According to Social Exchange Theory, a certain level of satisfaction must be met in order to continue the relationship. The comparison level of alternatives will be weighed by the patient if they feel their needs are not being met. They may consider choosing another doctor at this point. It seems reasonable to think that patients want to feel that they can talk to their doctor without fighting to get a word in edgewise. They may want to have some control in the conversation and the visit. Dominant physicians are even less appealing to patients who are not attracted to them. Patients want to have a comfortable and safe atmosphere which is conducive to voicing their concerns. Research Question #2 examined the relative importance of these salient communication style features. Only three of the variables (attentiveness, dominance and communicator image) had any impact on patient satisfaction (see Table II). Their effect on satisfaction (the goodness of outcome) was the greatest for meeting patient needs (endogenous consequences) within the interaction.

Research Question #3 explored the extent to which these components needed to be perceived by the patient to ensure

patient satisfaction. Attentiveness and communicator image are both positive affective modes of delivery. And a lack of dominance is also a positive affective mode. All of the seven components are not necessary to ensure patient satisfaction. These three variables, however, are simply the most effective modes of delivery. They help fulfill the situational requirements (endogenous consequences) of the patient and therefore, fulfill a degree of satisfaction from the patient-physician interaction (see Table III).

EFFECTS OF EDUCATION, RELATIONSHIP LENGTH AND PATIENT AGE ON PATIENT SATISFACTION

As indicated in Chapter IV, the patient's education and age had no bearing on satisfaction (see Table IV). This suggests that satisfaction is not an issue of socioeconomic status in this patient population. Similarly, the length of the relationship between the physician and the patient did not have any significant bearing on the patient's satisfaction. This is an interesting finding, one which fails to support the second hypothesis of this thesis: that the longer the relationship between the physician and the patient the more positive perceptions of communication style will ensue and, with that, more patient satisfaction. This may be due to the type of medical institution where the study took place. This outpatient clinic in a university hospital setting drew most of its clientele from lower socioeconomic backgrounds. Patients were seen regardless of their ability to pay and

could be seen for routine care on a walk-in basis if necessary. Additionally, the data suggest that the patients and physicians had short-term relationships averaging less than one year in length. As mentioned earlier, these patients could be classified as individuals that look to satisfy hygiene needs, according to Herzberg (1966), who had no need or incentive to develop a relationship with their physician.

EFFECTS OF WAITING TIME ON PATIENT SATISFACTION

The relationship between the length of patient waiting time and patient satisfaction (Research Question #5) was found to be non-significant (see Tables V and VI). Long and short duration of waiting times did not have a bearing on patient satisfaction when looking at education, relationship length and age. The exogenous consequences of waiting time were not found to affect patient satisfaction (goodness of outcome). Again, these findings might be explained with Herzberg's Motivation Hygiene Theory (1966). The patients seeking to satisfy hygiene needs may not consider a lengthy waiting time to be a cost. Rather, they would consider it more costly to ultimately not be able to see the doctor because their basic medical (hygiene) needs would not be met. If these needs were not met the patient may compare the level of attraction in the relationship. Social Exchange Theory asserts that this measure may be used to judge the other person in relation to the consideration they receive. In addition, the patient may

compare the level of alternatives and decide that they will no longer tolerate their needs not being met. In that case, they might go to another physician in the health care organization.

EFFECTS OF THE LENGTH OF THE MEDICAL VISIT ON PATIENT SATISFACTION

The relationship between the length of the medical visit and patient satisfaction (Research Question #6) was found to be non-significant (see Tables VII and VIII). These consequences, which could be both endogenous and exogenous, were also indistinguishable when associated with satisfaction; however, this population was found to be focused on exogenous (hygiene) needs. Education, relationship length and age produced no significant effects on patient satisfaction when the patient's medical visit was either short or long. The length of the medical visit did not bear any significant weight, with these demographics, on patient satisfaction. This may be explained again with Herzberg's (1966) theory. The patient who attempts to satisfy hygiene needs may not be necessarily sensitive to the time their physician spends with them in the medical visit. Shorter visits do not mean that this type of patient is less satisfied with their doctor. Similarly, longer visits do not necessarily mean that this patient will be more satisfied. Nonetheless, these visits do not necessarily imply that the doctor is any more thorough or attentive. In fact, longer visits may be longer simply because the physician has to interrupt the visit to answer

pages or urgent phone calls or to attend to the overbooking of scheduled patients. In any case, the longer, interrupted visit does not harm the patient's satisfaction because he/she may still receive basic medical care.

Although communication style played a smaller part in patient satisfaction than attraction the three communication style variables of attentiveness, dominance and communicator image assist in fulfilling the hygiene needs of this particular clientele. Perhaps the physician's *attentiveness* to the patient's concerns will expedite the fulfillment of his/her medical needs. Similarly, by not *dominating* the conversation and letting the patient talk more about their concerns, the physician may be able to make the visit as efficient as possible. Also, physicians who are *good communicators* may be particularly effective in this type of instrumental relationship. They may be good listeners and know when to ask closed and open-ended questions, thus, determining the patient's needs and fulfilling them.

CONGRUENCY OF PERCEPTIONS BETWEEN PHYSICIAN AND PATIENT ON THE PHYSICIAN'S COMMUNICATION STYLE

The relationship between the physician's self-perceptions of his/her communication style and the patient's perceptions of the physician's communication style (Research Question #4) was low, as noted in Chapter IV (see Table IX). This confirms the overall findings in Street and Wiemann's 1981 study. They found discrepancies between patient and physician perceptions

which varied as a function of the patient's age and education. They also found that perceptions of more educated patients were more congruent with physician perceptions (p. 435). I suggest that the more educated patient seeks to fill motivational needs. Moreover, education may be related to the economic resources of the patient and their implications for care. He/she may have a more equal relationship with their doctor and have more social conversation in their visits. These additional social components may increase the congruency of perceptions because there is an increase in social penetration and a more developed "humanized" relationship. These patients may be more likely to require endogenous rewards and expect a certain "relational attentiveness". This may include being treated with respect that may be perceived in the physician's communication style. In addition, Street and Wiemann (1981) found that perceptions were increasingly more incongruent with patients over 50 years old (p. 413). This study did not address those particular variables but re-examined the congruency issue. In view of this, the issue of congruency is of marginal importance since findings show that patient satisfaction is merely a matter of getting hygiene needs met.

The perceptions of both physician and patient are also measurements of endogenous consequences. The physician's communication style is an important factor in the goodness of outcome. The more congruent perceptions are, the more they

are indicative of patient satisfaction only with motivation-seekers. Congruency was highest on the following four variables: *friendliness*, *dominance*, *attentiveness*, and *communicator image* because these were instrumental to patient needs fulfillment. In addition, it is interesting to note that three of these four variables were also found to be the strongest predictors of satisfaction. Those were *dominance*, *attentiveness* and *communicator image*. It seems reasonable to conclude that there was mild congruency on these four variables because they were the salient characteristics of the physician's communication style that were essential to the patient's satisfaction. The patient was attuned to these characteristics because they had a direct bearing upon the fulfillment of their needs. As noted earlier, these communication styles could be instrumental for the hygiene-based patient.

LIMITATIONS OF THE STUDY

There were various limitations of this study. First of all, the sample did not represent gender adequately. There were only 20 male patients out of the 108 total sample. Additionally, only 7 of the 20 physicians were female.

The initial male patient sample size for the physician-patient dyads precluded assessing the effects of perceived physician communication on patient satisfaction in one sub-sample. The female physician/male patient condition,

being under-represented with two cases, was insufficient to run analysis for the first hypothesis. Although the male physician/male patient dyads were slightly better represented with fifteen cases and analyses were run, the limited sample size renders the results of those analyses tentative, at best. The male physician/male patient dyads were more highly represented because all of the faculty portion of the physician sample were male.

Second, and as my explanations to this point make clear, the sample population used for the study did not reflect the variability found in the patient population more generally. This lack of a representative patient population, and not taking this factor into account at the onset, proved to be limiting. Patient subjects were selected from an outpatient clinic at a university hospital; here, clientele are known to be highly representative of lower socioeconomic backgrounds. This, I believe, played a significant role in the failure to find support for Hypothesis #1. The patient population may have had needs and expectations that were different from other medical clinic populations (i.e., private hospitals). The majority of these patients only wanted their hygiene needs met (Herzberg, 1966). Their expectations did not exceed much beyond their medical care issues. Consequently, communication style did not play a significant role in patient satisfaction.

Third, the sample physician population also did not reflect the variability more generally found in that

population. Physicians were selected either on the basis of their known approachability or their amenability to the request for participation. The homogeneity of the physician subjects also proved to be limiting.

Fourth, the data were flawed due to the limitations in data collection. The extent to which the instrument packets were filled out properly and thoughtfully by patients and physicians must be considered. Some patients and physicians were obviously in a hurry to complete the form. In some instances, patients that agreed to participate in the study at the beginning of the visit were less interested in fulfilling that obligation by the end of the visit. Hence, they were anxious to leave the clinic and completed the packets very quickly and without much deliberation. Some physicians were also less interested as the study progressed in later weeks. The lagtime between the medical visit and the data collection also contributed to flawed data. Patients did complete their packets before they left the clinic but several doctors did not complete their forms until days later, possibly longer. This was a situation that was hard to avoid because of the doctors' tight schedules.

FUTURE DIRECTIONS

It is interesting that the measure of attraction which the patient uses to judge their physician, defined as comparison level in Social Exchange Theory, does account for

the association of communication style and patient satisfaction. Thibaut and Kelley, (1959) defined this measure of attraction as one which allowed an individual to gauge their satisfaction with the relationship. In this particular context, this theory may explain why patients will gauge their satisfaction with their physician based on the physician's general attractiveness rather than the physician's particular communication style. This discovery becomes an important conceptual and methodological concern for future interpersonal communication research. When studying perceptions of communication or any other behavioral observations, researchers might include a partial correlation to determine the effects of attraction on an individual's perceptions. Perhaps, a "truer" picture of the association between two or more variables would be found. Eliminating a "halo effect" might be a prudent step to take before making less than accurate conclusions from the unpartialled data.

Future directions for studying patient-physician interactions should focus on the selection of a setting that is geared towards a wider range of patient populations in a private health care organization or in an array of Health Maintenance Organizations (HMOs). A better representation of patients with higher socioeconomic backgrounds would provide a pool of patient subjects who may be more interested in a long-term relationship with their physician and have a greater interest in their health care (motivation needs). These

patients would also view attention as an important aspect of care, as well as good medical treatment, respect from their physician, and a personalized verbal exchange that includes empathy and care. As noted in Street and Wiemann's study (1981), the better educated patients had more congruent perceptions with their physicians' communication style. This may be due to the particular needs of the patient population studied. They were more likely to be concerned with fulfilling endogenous needs, and have higher expectations for service, and therefore, be more attuned to physician communication style. It is not difficult to imagine that in "private" health care settings, patients who are better educated and who have higher expectations for service (motivator needs) would be found. Where endogenous rewards may be more important, congruency would be greater. This link would be indicative of a significant relationship between physician communication style and patient satisfaction.

Communication style is an elusive concept. It may not be an appropriate one for the particular context of this study. This concept may be better examined in different settings to determine whether communication style is important to relationships that are more than instrumental. I suspect this may be true. Patients in private hospital settings who have developed long-term relationships with their physicians would be more responsive and sensitive to the physician's communication style. Perhaps, applying Pettegrew's (1977)

therapeutic communication style concept would be better suited in circumstances where patients seek more psychosocial care and are interested in developing a long-term relationship with their physician.

Finally, in building upon this study, it would be advisable for other researchers to make sure physicians agree to do their part. Not only is it necessary to enlist their verbal support, but it is also necessary to enlist their practical involvement in the study. Their active involvement would not only result in less flawed data, but it would also help patient participants see how important research in health care communication is to providing quality patient care and improving patient satisfaction.

REFERENCES

- Arliss, L. P. (1991). Gender communication. Englewood Cliffs, N.J.: Prentice Hall.
- Arntson, P. (1985). Future research in health communication. Journal of Applied Communication Research, 13, 118-130.
- Bates, E., & Moore, B. (1975). Stress in hospital personnel. The Medical Journal of Australia, 2, 765-67.
- Ben-Sira, Z. (1976). The function of the professional's affective behavior in client satisfaction: A revised approach to social interaction theory. Journal of Health and Social Behavior, 17, 3-11.
- Ben-Sira, Z. (1980). Affective and instrumental components in the physician-patient relationship: An additional dimension of interaction theory. Journal of Health and Social Behavior, 21, 170-80.
- Berscheid, E., & Walster, E.H. (1978). Interpersonal attraction (2nd ed.). Reading, Mass.: Addison-Wesley Publishing Co.
- Bowden, C. L., & Burstein, A. G. (1979). Psychosocial basis of medical practice: An introduction to human behavior (2nd ed.). Baltimore: The Williams & Wilkins Co.
- Brewer, R. E., & Brewer, M. B. (1968). Attraction and accuracy of perception in dyads. Journal of Personality and Social Psychology, 8, 188-193.
- Burgoon, M. H. & Burgoon, J. K. (1990). Compliance-gaining and health care. In J. P. Dillard (Ed.), Seeking compliance: The production of interpersonal influence messages (pp. 161-188). Scottsdale, AZ: Gorsuch Scarisbrick.
- Burgoon, J. K., Pfau, M., Parrott, R., Birk, T., Coker, R., & Burgeon, M. (1987). Relational communication, satisfaction, compliance-gaining strategies, and compliance in communication between physicians and patients. Communication Monographs, 54, 307-324.
- Byrne, D. (1971). The attraction paradigm. New York: Academic Press.

- Campbell, D. T. & Stanley, J. C. (1963). Experimental and quasi-experimental designs for research. Skokie, IL: Rand McNally.
- Cappella, J. N., & Palmer, M. T. (1990). Attitude similarity, relational history, and attraction: The mediating effects of kinesic and vocal behaviors. Communication Monographs, 57, 161-183.
- Congressional Budget Office. (1982). Containing medical costs through market forces. Washington, DC: The Congress of the U.S.
- Costello, D. E. & Pettegrew, L. S. (1979). Health communication theory and research: An overview of health organizations. In D. Nimmo (Ed.), Communication Yearbook 3 (pp. 605-623), New Brunswick, NJ:
- Dexheimer, E. (1991), January 24-30). Hard time on the hill: Albert Starr and the indigent health care mess at Oregon Health Sciences University. Willamette Week pp. 1, 9-13.
- Duck, S. W. (1973). Personal relationships and personal constructs: A study of friendship formation. London: J. Wiley & Sons.
- Ekman, P. & Friesen, W. V. (1969). Nonverbal leakage and clues to deception. Psychiatry, 32, 88-106.
- Eraker, S. S., Kirscht, J. P., & Becker, M. H. (1984). Understanding and improving patient compliance. Annals of Internal Medicine, 100, 258-268.
- Foeller, M. L. (1984). Satisfaction and quality: Patient perspectives in medical care. Unpublished master's thesis, Portland State University, Portland, OR.
- Frank, J. (1961). Persuasion and healing. New York: Schocken.
- Frey, L. R., Botan, C. H., Friedman, P. G. & Kreps, G. L. (1991). Investigating communication: An introduction to research methods. Englewood Cliffs, New Jersey: Prentice Hall.
- Greenburg, W. (Ed.). (1978). Competition in the health care sector: Past, present, and future. Germantown, MD: Aspen Systems Corp.
- Guilford, J. P. (1954). Psychometric methods. New York: McGraw-Hill, Inc.

- Hall, J. A., Roter, D. L., & Rand, C. S. (1981). Communication of affect between patient and physician. Journal of Health and Social Behavior, 22, 18-30.
- Hawes, L. (1972). The effects of interviewer style on patterns of dyadic communication. Speech Monographs, 39, 114-123.
- Hecht, M. (1978). The conceptualization and measurement of interpersonal communication satisfaction. Human Communication Research, 4, 253-264.
- Klinefelter, J. (1991, February 7). (Interview with Accounting Manager of OHSU Fiscal Services).
- Kreps, G. L. (1990). Communication and health education. In E. B. Ray & L. Donohew (Eds.), Communication and health: Systems and application. New Jersey: Lawrence Erlbaum Associates.
- Kreps, G. L. (1978). The pervasive role of information in health and health care: Implications for health communication policy. In J. Anderson (Ed.), Communication Yearbook 2 (pp. 233-276), Beverly Hills: Sage.
- Kreps, C. L. Relational communication in health care. Southern Speech Communication Journal, 53, 344-359.
- Kreps, G. L. & Thornton, B. C. (1984). Health communication. New York: Longman, Inc.
- Lane, S. (1983). Compliance, satisfaction and physician-patient communication. In R. Bostrun (Ed.), Communication Yearbook 7 (pp. 772-799), Beverly Hills: Sage.
- Larson, C., Backlund, P., Redmond, M., & Barbour, A. (1978). Assessing functional communication. Falls Church, VA: Speech Communication Association.
- Ley, P., (1982). Satisfaction, compliance and communication. British Journal of Clinical Psychology, 21, 241-254.
- Littlejohn, S. W. (1987). Theories of human communication (3rd ed.). Belmont, CA: Wadsworth.
- Luft, H. S. (1981). Health maintenance organizations. New York: J. Wiley & Sons.
- McCall, M. (1970). Boundary rules in relationships and encounters. In G. McCall, M. McCall, N. Denzin, G. Suttles, and S. Kurth (eds.) Social Relationships. Chicago: AVC.

- Mahoney, S. D. (1973, April 5-8). The effects of physical appearance and behavior upon ratings of social attractiveness. Paper presented at the annual convention of the Rocky Mountain Psychological Association, Denver, CO.
- Nie, N. H., Hull, C. H., Jenkins, J. G., Steinbrenner, K., & Bent, D. H. SPSS (2nd ed.). New York: McGraw-Hill, Inc
- Norton, R. W. (1978). Foundation of a communicator style construct. Human Communication Research, 4, 99-112.
- Norton, R. W. (1983). Communicator style: Theory, applications, and measures. Beverly Hills: Sage.
- Patzer, C. L. (1985). The physical attractiveness phenomena. New York: Plenum Press.
- Pendleton, D. (1985). Towards more effective medical practice. Journal of Applied Communication Research, 13, 96-102.
- Pettegrew, L. & Thomas, R. C. (1978). Communicator style differences in formal vs. informal therapeutic relationships. In B. Ruben (Ed.), Communication Yearbook 2 (pp. 523-538). New Brunswick, NJ: International Communication Association.
- Pettegrew, L. (1977). An investigation of therapeutic communicator style. In B. Ruben (Eds.), Communication Yearbook 1 (pp. 593-604). New Brunswick, NJ: International Communication Association.
- Rogers, C. R. (1951). Client-centered therapy. Boston: Houghton-Mifflin.
- Roloff, M. E. (1981). Interpersonal Communication: The social exchange approach. Beverly Hills: Sage.
- Speeding, E. J., & Rose, D. N. (1985). Building an effective doctor-patient relationship: From patient satisfaction to patient participation. Social Science and Medicine, 21, 115-120.
- Street, R. L., Jr., & Wiemann, J. M. (1988). Differences in how physicians and patients perceive physician's relational communication. Southern Speech Communication Journal, 53.
- Tannen, D. (1990). You just don't understand: Women and men in conversation. New York: Wm. Morrow & Co., Inc.

- Thibaut, J. W. & Kelley, H. H. (1959). The social psychology of groups. New York: John Wiley & Sons.
- Thorne, B., & Henley, N. (Eds.). (1975). Language and sex: Difference and dominance. Rowley, MA: Newbury House Publishers, Inc.
- Waitzkin, H. (1984). Doctor-patient communication: Clinical implications of social scientific research. Journal of American Medical Association, 17, 2441-2446.
- Wallston & Wallston, B. (1978). Development of the multi-dimensional health locus of control. Health Monographs, 6, 160-169.
- Wooley, F. R., Kane, R. L., Hughes, C. C., & Wright, D. D. (1978). The effects of doctor-patient communication on satisfaction and outcome of care. Social Science Medicine, 12, 123-128.
- Young, J. W. (1980, May 18-23). Willingness to disclose symptoms to a male physician: Effect of the physician's physical attractiveness body area of symptom, and the patient's self-esteem, locus of control and sex. Paper presented at the annual meeting of the International Communication Association, Acapulco, Mexico.

APPENDIX A

PATIENT COVER LETTER

Patient-Physician Interaction And
Patient Care Outcomes
(PATIENT)

We are asking you to take part in a study to examine interaction between patients and physicians. Your participation in this study will involve: 1) filling out a communicator style measure questionnaire following your visit; 2) filling out a second questionnaire about patient satisfaction following your visit; and 3) filling out a brief rating scale about your physician following your visit. This will take you no more than 10 minutes to complete.

Please do not put your name anywhere on these questionnaires. You will be given complete anonymity; your identity will not be known. Any information obtained from this study will be available only to study personnel. Your identity cannot be revealed in any published or oral presentation of the results of this study.

You may choose not to participate in this study without penalty or loss of benefits to which you are otherwise entitled. If you do choose to participate, you are free to refuse to answer any specific question, and to withdraw from this study without penalty or loss of benefits to which you are otherwise entitled.

You will not receive any direct benefits from participation in this study. However, participation will assist the Oregon Health Sciences University in its effort to improve the quality of patient health care. The only risk to you from participation in this study may be inconvenience because of the time required to answer the questionnaires.

If you have additional questions during the course of this study, or if any problems arise, you may address them to Dr. John W. Saultz or Lisa Abramson at (503) 494-7590.

Thank you.

APPENDIX B

PHYSICIAN COVER LETTER

Patient-Physician Interaction And
Patient Care Outcomes
(PHYSICIAN)

We are asking you to take part in a study to examine interaction between patients and physicians. Your participation in this study will involve: 1) filling out a questionnaire about your general impressions of your communicator style; and 2) filling out a questionnaire about your specific communicator style immediately following each medical visit with particular patients. The first previsit questionnaire (completed only one time) will take about 5 minutes to complete. The post-visit questionnaires will take less than 5 minutes to complete shortly after each patient visit.

Please do not put your name anywhere on these questionnaires. You will be given complete anonymity; your identity will not be known. Any information obtained from this study will be available only to study personnel. Your identity cannot be revealed in any published or oral presentation of the results of this study.

You may choose not to participate in this study without penalty or loss of benefits to which you are otherwise entitled. If you do choose to participate, you are free to refuse to answer any specific question, and to withdraw from this study without penalty or loss of benefits to which you are otherwise entitled.

You will not receive any direct benefits from participation in this study. However, participation will assist the Oregon Health Sciences University in its effort to improve the quality of patient health care. The only risk to you from participation in this study may be inconvenience because of the time required to answer the questionnaires.

If you have additional questions during the course of this study, or if any problems arise, you may address them to Dr. John W. Saultz or Lisa Abramson at (503) 494-7590.

Thank you.

APPENDIX C

MODIFIED QUESTIONS OF THE THERAPEUTIC COMMUNICATOR STYLE MEASURE (TCSM)

THERAPEUTIC COMMUNICATION STYLE MEASURE (TCSM)
Modified Questions and Variables Tapped

Original Question	Modified Question	Variable Tapped
(1) This doctor readily expresses admiration for me.	In this visit, this doctor let me know he/she cared.	FRIENDLY
(3) This doctor leaves me with an impression which I definitely tend to remember. AND (10) This doctor leaves a definite impression on me.	In this visit, this doctor let me know he/she cared about me.	IMPRESSION LEAVING
(4) To be friendly, this doctor habitually acknowledges verbally my contributions to the conversation.	The doctor told me that he/she understood what I said.	FRIENDLY
(5) This doctor is a very good communicator. AND (15) In nearly every conversation with me this doctor is a very good communicator.	This doctor was a very good communicator.	COMMUNICATOR IMAGE

THERAPEUTIC COMMUNICATOR STYLE MEASURE (TCSM)
Modified Questions and Variables Tapped
(Continued)

Original Question	Modified Question	Variable Tapped
(6) This doctor has some nervous mannerisms in his/her speech.	This doctor seemed nervous when he/she spoke to me.	RELAXED
(7) This doctor is a very relaxed communicator.	This doctor was very relaxed.	RELAXED
(8) This doctor can always repeat back to me exactly what I meant.	This doctor repeated back to me exactly what I meant.	ATTENTIVE
(9) This doctor was a very precise communicator.	The doctor was very specific in what he/she said.	CONTENTIOUS
(13) Usually, this doctor deliberately reacts in such a way that I knew he/she is listening to me.	The doctor responded in a way that I knew he/she was listening to me.	ATTENTIVE
(14) This doctor almost always shows me that he/she is accurately of my feelings and emotions.	The doctor showed me that he/she was aware of my feelings and emotions.	ATTENTIVE

THERAPEUTIC COMMUNICATOR STYLE MEASURE (TCSM)
Modified Questions and Variables Tapped
(Continued)

Original Question	Modified Question	Variable Tapped
(16) I n o u r conversations, this doctor insists on very p r e c i s e definitions.	The doctor wanted me to describe my concerns in a very specific way.	CONTENTIOUS
(17) In most of our conversations this doctor generally speaks very frequently.	The doctor spoke very often.	DOMINANT
(18) This doctor is dominant in our conversations.	The doctor dominated the conversation during the visit.	DOMINANT
(19) This doctor is a l w a y s a n e x t r e m e l y f r i e n d l y communicator.	The doctor really liked listening very carefully to me.	ATTENTIVE
(21) Very often this doctor insists that I document or present some kind of proof for what I am claiming.	The doctor insisted that I give some examples for what I said was bothering me.	CONTENTIOUS

THERAPEUTIC COMMUNICATOR STYLE MEASURE (TCSM)
Modified Questions and Variables Tapped
(Continued)

Original Question	Modified Question	Variable Tapped
(22) The way this doctor says something usually leaves an impression on me.	The way the doctor spoke left an impression on me.	IMPRESSION LEAVING
(25) This doctor is an extremely attentive communicator.	The doctor was extremely attentive to me in this visit.	ATTENTIVE
(26) Out of a group of my 5 closest friends, this doctor's conversation is more helpful than: All of them, 4 of them, 3 of them, 2 of them, one of them or none of them.	Compared to other doctors I've seen, this doctor's conversation is more helpful, just as helpful or less helpful.	COMMUNICATOR IMAGE

APPENDIX D

THE PATIENT'S THERAPEUTIC COMMUNICATOR STYLE MEASURE (TCSM)

COMMUNICATOR STYLE MEASURE (Patient)

We are studying the way your physician communicates with you during the visit you just finished.

Please do not spend too much time on the questions. Let your first impression be your guide. Try to answer as honestly as possible. All answers will be kept strictly confidential.

Some questions will be difficult to answer because you honestly do not know. For these questions please try to determine which way you are leaning and answer in the appropriate direction. Please answer every question.

The following scale is used for each item:

No! = STRONGLY DISAGREE with the statement
no = DISAGREE with the statement
? = NEITHER AGREE nor DISAGREE with the statement
yes = AGREE with the statement
YES! = STRONGLY AGREE with the statement

For example, if you agree with the following statement, "I dislike the coldness of winter," then you would circle the "yes" as indicated:

NO! no ? yes YES!

Some of the questions will seem quite similar. However, each question has a slightly different focus. Try to answer each question as if it were the only question being asked.

ON: (Please CIRCLE ONE on EACH QUESTION)

- [illegible]

5. How long did you wait to see your doctor today?:

Less than	5-10	Up to	Longer than
5 minutes	minutes	20 minutes	20 minutes
(1)	(2)	(3)	(4)

6. How long was your visit today with this doctor?:

Less than	5-10	up to	Longer than
5 minutes	minutes	20 minutes	20 minutes
(1)	(2)	(3)	(4)

Thank you for your help today!

CSM Questionnaire (Patient)

1. At this visit, the doctor let me know that he cared about me.
NO! no ? yes YES!
2. At this visit, the doctor left a definite impression on me.
NO! no ? yes YES!
3. The doctor told me that he/she understood what I said.
NO! no ? yes YES!
4. The doctor was a very good communicator.
NO! no ? yes YES!
5. The doctor seemed nervous when he/she spoke to me.
NO! no ? yes YES!
6. The doctor was very relaxed.
NO! no ? yes YES!
7. The doctor repeated back to me exactly what I meant.
NO! no ? yes YES!
8. The doctor was very specific in what he/she said.
NO! no ? yes YES!
9. The doctor responded in such a way that I knew he/she was listening to me.
NO! no ? yes YES!
10. The doctor showed me that he/she was aware of my feelings and emotions.
NO! no ? yes YES!
11. The doctor wanted me to describe my concerns in a very specific way.
NO! no ? yes YES!
12. The doctor spoke very often.
NO! no ? yes YES!
13. The doctor dominated the conversation during this visit.
NO! no ? yes YES!
14. The doctor was extremely friendly during my visit.
NO! no ? yes YES!
15. The doctor really liked listening very carefully to me.
NO! no ? yes YES!

16. The doctor insisted that I give some examples for what I said was bothering me.
NO! no ? yes YES!
17. The way this doctor spoke left an impression on me.
NO! no ? yes YES!
18. The doctor was extremely attentive to me in this visit.
NO! no ? yes YES!
19. Compared to other doctors I've seen, this doctor's conversation is: (Circle One Choice)

More helpful	Just as helpful	Less helpful
(1)	(2)	(3)

APPENDIX E

THE PHYSICIAN-PATIENT COMMUNICATION SATISFACTION INVENTORY (PPCSI)

PHYSICIAN/PATIENT COMMUNICATION SATISFACTION INVENTORY

The purpose of this questionnaire is to investigate your reactions to the visit you just had. You will be asked to react to a number of statements. Please indicate the degree to which you agree or disagree that each statement describes this visit. The 4 or middle position on the scale represents "undecided" or "neutral," then moving out from the center, "slight" agreement or disagreement, then "moderate," then "strong" agreement or disagreement.

For example, if you strongly agree with the following statement you would circle 7:

The doctor moved around a lot.

Disagree: 1: 2: 3: 4: 5: 6: 7: Agree

1. I did not feel that I could disagree with the doctor.

Disagree: 1: 2: 3: 4: 5: 6: 7: Agree

2. The doctor listened carefully to everything I said.

Disagree: 1: 2: 3: 4: 5: 6: 7: Agree

3. The doctor did not tell me everything I needed to know about my health or treatment.

Disagree: 1: 2: 3: 4: 5: 6: 7: Agree

4. I felt the doctor genuinely cared about what was happening to me.

Disagree: 1: 2: 3: 4: 5: 6: 7: Agree

5. I did not understand what the doctor was saying.

Disagree: 1: 2: 3: 4: 5: 6: 7: Agree

6. I felt free to disagree with my doctor.

Disagree: 1: 2: 3: 4: 5: 6: 7: Agree

7. The doctor offered me choices.

Disagree: 1: 2: 3: 4: 5: 6: 7: Agree

8. The doctor did not understand how my health was affecting my life.

Disagree: 1: 2: 3: 4: 5: 6: 7: Agree

9. I could easily understand what the doctor was saying.

Disagree: 1: 2: 3: 4: 5: 6: 7: Agree

10. The doctor showed me that he/she understood my concern about my health.
Disagree: 1: 2: 3: 4: 5: 6: 7: Agree
11. The doctor did not seem to care about me.
Disagree: 1: 2: 3: 4: 5: 6: 7: Agree
12. The doctor was open and willing to share information with me.
Disagree: 1: 2: 3: 4: 5: 6: 7: Agree
13. The doctor did not let me decide how I wished to be medically treated.
Disagree: 1: 2: 3: 4: 5: 6: 7: Agree
14. The doctor did not believe me.
Disagree: 1: 2: 3: 4: 5: 6: 7: Agree
15. The doctor was busy and in a hurry to end this conversation.
Disagree: 1: 2: 3: 4: 5: 6: 7: Agree
16. The doctor did not think my concerns were important.
Disagree: 1: 2: 3: 4: 5: 6: 7: Agree
17. The doctor was relaxed and interested.
Disagree: 1: 2: 3: 4: 5: 6: 7: Agree
18. The doctor showed me that he/she took my symptoms seriously.
Disagree: 1: 2: 3: 4: 5: 6: 7: Agree

APPENDIX F

SCORING KEY FOR THE PPCSI

Scoring Key for the PPCSI

THE PPCSI

For Items 2, 4, 6, 7, 9, 10, 12, 17, 18:

Strongly Agree = 7, Moderately Agree = 6, Slightly Agree = 5,
Neutral = 4, Slightly Disagree = 3, Moderately Disagree = 2,
Strongly Disagree = 1

For Items 1, 3, 5, 8, 11, 13, 14, 15, 16:

Strongly Agree = 1, Moderately Agree = 2, Slightly Agree = 3.
Neutral = 4, Slightly Disagree = 5, Moderately Disagree = 6,
Strongly Disagree = 7

APPENDIX G

THE PHYSICIAN ATTRACTIVENESS RATING SCALE (PARS)

PHYSICIAN RATING SCALE

Please circle number that best describes your response:

MY OVERALL FEELING ABOUT THIS PHYSICIAN COULD BE ACCURATELY BE DESCRIBED AS:

<u>1</u>	:	<u>2</u>	:	<u>3</u>	:	<u>4</u>	:	<u>5</u>	:	<u>6</u>	:	<u>7</u>	:	<u>8</u>	:	<u>9</u>	:
EXTREME DISLIKE								NEITHER LIKE NOR DISLIKE								EXTREME LIKE	

APPENDIX H

THE INSTRUCTOR RATING SCALE

INSTRUCTOR RATING SCALE

Think of the last Science course you took (not in your major department) (Biology, Chemistry, Physics, Math, Geology) and circle the number that best describes your response:

MY OVERALL FEELING ABOUT THE INSTRUCTOR OF THAT COURSE COULD MOST ACCURATELY BE DESCRIBED AS:

1 : 2 : 3 : 4 : 5 : 6 : 7 : 8 : 9 :
 EXTREME
 DISLIKE
 NEITHER
 LIKE NOR
 DISLIKE
 EXTREME
 LIKE

Think of the last Social Science course you took (not in your major department) (Anthropology, History, Geography, Political Science, Psychology, Sociology) and circle the number that best describes your response:

MY OVERALL FEELING ABOUT THE INSTRUCTOR OF THAT COURSE COULD MOST ACCURATELY BE DESCRIBED AS:

1 : 2 : 3 : 4 : 5 : 6 : 7 : 8 : 9 :
 EXTREME
 DISLIKE
 NEITHER
 LIKE NOR
 DISLIKE
 EXTREME
 LIKE

Think of the last Arts and Letters course you took (not in your major department) (English, Theater Arts, Music, Dance) and circle the number that best describes your response:

MY OVERALL FEELING ABOUT THE INSTRUCTOR OF THAT COURSE COULD MOST ACCURATELY BE DESCRIBED AS:

<u>1</u>	:	<u>2</u>	:	<u>3</u>	:	<u>4</u>	:	<u>5</u>	:	<u>6</u>	:	<u>7</u>	:	<u>8</u>	:	<u>9</u>	:
EXTREME DISLIKE								NEITHER LIKE NOR DISLIKE								EXTREME LIKE	

APPENDIX I

THE PHYSICIAN'S GENERAL THERAPEUTIC COMMUNICATOR STYLE MEASURE (TCSM)

COMMUNICATOR STYLE MEASURE (CSM)
(Physician)
GENERAL IMPRESSIONS

This measure focuses upon your sensitivity to the way you communicate or what is called your communicator style.

The questions are not designed to look at what is communicated, rather it is designed to explore the way you communicate in the medical visit. We are interested in your general impressions of how you communicate across both patients and visits. We are asking you to describe how you communicate with your patients most often.

Please do not spend too much time on the questions. Let your first impressions be your guide. Try to answer as honestly as possible. All answers will be kept strictly confidential.

Some questions will be difficult to answer because you honestly do not know. For these questions please try to determine which way you are leaning and answer in the appropriate direction.

The following scale is used for each item:

NO! = STRONGLY DISAGREE with the statement
no = DISAGREE with the statement
? = NEITHER AGREE NOR DISAGREE with the statement
yes = AGREE with the statement
YES! = STRONGLY AGREE with the statement

Some of the questions will seem quite similar. However, each question has a slightly different focus. Try to answer each question as it relates to your general style of communication in face-to-face medical visits.

Thank you!

CSM Questionnaire (Physician)
GENERAL IMPRESSIONS

1. I readily let my patients know that I care about them.
NO! no ? yes YES!
2. What I say usually leaves an impression on my patients.
NO! no ? yes YES!
3. I leave a definite impression on my patients.
NO! no ? yes YES!
4. I regularly let my patients know that I am aware of what they say.
NO! no ? yes YES!
5. In nearly every medical visit, I am a very good communicator with my patients.
NO! no ? yes YES!
6. I have some nervous habits when I speak to my patients.
(For example: the rhythm or flow of my speech)
NO! no ? yes YES!
7. I am a very relaxed communicator with my patients.
NO! no ? yes YES!
8. I can always repeat back to my patients exactly what they meant.
NO! no ? yes YES!
9. I speak in a very specific way with my patients.
NO! no ? yes YES!
10. Usually, I respond to my patients in such a way that they know I am listening to them.
NO! no ? yes YES!
11. I almost always show my patients that I am accurately aware of their feelings and emotions.
NO! no ? yes YES!
12. In the medical visit, I insist that my patients give me a clear idea of what is bothering them.
NO! no ? yes YES!
13. In most medical visits I speak very often.
NO! no ? yes YES!

14. I usually dominate the conversation in the medical visit.
NO! no ? yes YES!
15. I am always a very friendly communicator.
NO! no ? yes YES!
16. I really like to listen very carefully to my patients.
NO! no ? yes YES!
17. The way I say things usually leaves an impression on my patients.
NO! no ? yes YES!
18. I am extremely attentive to my patients.
NO! no ? yes YES!
19. Compared to other physicians, my conversational style with patients is: (Circle One Choice)
More helpful	Just as helpful	Less helpful
(1)	(2)	(3)

APPENDIX J

THE PHYSICIAN'S SPECIFIC THERAPEUTIC COMMUNICATOR STYLE MEASURE (TCSM)

COMMUNICATOR STYLE MEASURE
(Physician)
SPECIFIC VISIT

This measure focuses upon your sensitivity to the way you communicate or what is called your communicator style.

The questions are not designed to look at what is communicated; rather, they explore the way you communicate in the visit you just had with your patient. Please use this specific visit to rate your communicator style.

Because there is no such thing as "correct" style of communication, none of the following items have right or wrong answers.

Please do not spend too much time on the items. Let your first inclination be your guide. Try to answer as honestly as possible. All responses will be strictly confidential.

Some questions will be difficult to answer because you honestly do not know. For these questions, however, please try to determine which way you are leaning and answer in the appropriate direction.

The following scale is used for each item:

NO! = STRONGLY DISAGREE with the statement
no = DISAGREE with the statement
? = NEITHER AGREE NOR DISAGREE with the statement
yes = AGREE with the statement
YES! = STRONGLY AGREE with the statement

For example, if you agree with the following statement, "I dislike the coldness of winter," then you would circle the "yes" as indicated:

NO! no ? yes YES!

Some of the items will seem quite similar. However, each question has a slightly different focus. Try to answer each question as if it were the only question being asked.

Finally, answer each question as it relates to the visit you just completed.

Please answer the following question:

What is the reason for the patient's visit today (CIRCLE ONE):

Acute condition
(1)

Chronic Condition
(2)

Other
(3)

THANK YOU!

CSM Questionnaire (Physician)
SPECIFIC VISIT

1. In this visit, I let my patient know that I cared about them.
NO! no ? yes YES!
2. In this visit, I left a definite impression on my patient.
NO! no ? yes YES!
3. I let this patient know that I understood what he/she said.
NO! no ? yes YES!
4. I was a very good communicator in this visit.
NO! no ? yes YES!
5. I was nervous when I spoke to my patient in this visit.
NO! no ? yes YES!
6. I felt very relaxed during this visit.
NO! no ? yes YES!
7. I repeated back to my patient exactly what they meant in this visit.
NO! no ? yes YES!
8. I was very specific in what I said during this visit.
NO! no ? yes YES!
9. In this visit, I responded in such a way that my patient knew that I was listening to her/him.
NO! no ? yes YES!
10. In this visit, I showed my patient that I was aware of her/his feelings and emotions.
NO! no ? yes YES!
11. In this visit, I asked my patient to describe his/her concerns in a very specific way.
NO! no ? yes YES!
12. In this visit, I spoke very often.
NO! no ? yes YES!
13. I dominated the conversation during this visit.
NO! no ? yes YES!
14. I was extremely friendly during this visit.
NO! no ? yes YES!

15. I really liked listening very carefully to my patient in this visit.
NO! no ? yes YES!
16. In this visit, I insisted that my patient give some examples of what they said was bothering them.
NO! no ? yes YES!
17. In this visit, the way that I spoke left an impression on my patient.
NO! no ? yes YES!
18. I was extremely attentive to my patient during this visit.
NO! no ? yes YES!