

---

Student Work

---

5-1999

## The Physician/Patient Interaction: Patient Satisfaction, Communication Apprehension, and Health Locus of Control

Darian Allicia Galyon  
*University of Nebraska at Omaha*

Follow this and additional works at: <https://digitalcommons.unomaha.edu/studentwork>

 Part of the [Communication Commons](#)

Please take our feedback survey at: [https://unomaha.az1.qualtrics.com/jfe/form/SV\\_8cchtFmpDyGfBLE](https://unomaha.az1.qualtrics.com/jfe/form/SV_8cchtFmpDyGfBLE)

---

### Recommended Citation

Galyon, Darian Allicia, "The Physician/Patient Interaction: Patient Satisfaction, Communication Apprehension, and Health Locus of Control" (1999). *Student Work*. 208.  
<https://digitalcommons.unomaha.edu/studentwork/208>

This Thesis is brought to you for free and open access by DigitalCommons@UNO. It has been accepted for inclusion in Student Work by an authorized administrator of DigitalCommons@UNO. For more information, please contact [unodigitalcommons@unomaha.edu](mailto:unodigitalcommons@unomaha.edu).

**The Physician/Patient Interaction: Patient Satisfaction, Communication  
Apprehension, and Health Locus of Control**

**A Thesis**

**Presented to the**

**Department of Communication**

**and the**

**Faculty of the Graduate College**

**University of Nebraska**

**In Partial Fulfillment**

**of the Requirements for the Degree**

**Master of Arts**

**University of Nebraska at Omaha**

**By**

**Darian Allicia Galyon**

**May, 1999**

UMI Number: EP72849

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



UMI EP72849

Published by ProQuest LLC (2015). Copyright in the Dissertation held by the Author.

Microform Edition © ProQuest LLC.

All rights reserved. This work is protected against unauthorized copying under Title 17, United States Code



ProQuest LLC.  
789 East Eisenhower Parkway  
P.O. Box 1346  
Ann Arbor, MI 48106 - 1346

## Acceptance Page

### Thesis Acceptance

Acceptance for the faculty of the Graduate College,  
University of Nebraska, in partial fulfillment of the  
requirements for the degree Master of Arts, University of  
Nebraska at Omaha.

### Committee

Name

Department/School

Karen Kangas Dwyer, Communication

Shireen S. Rajaram Sociology/  
Arts & Science

Chairperson

Robert E. Carlson  
Communication

Date

4/13/99

## **Abstract**

The purpose of this investigation was to discover the nature of the relationships between a patient's communication apprehension with physicians and health locus of control and his/her satisfaction with the physician/patient interaction. No significant relationship was found between communication apprehension and a patient's health locus of control. However, a positive correlation was found between communication apprehension and overall patient satisfaction and patient satisfaction with information. Possible explanations exist for this unexpected result within the uncertainty literature, and by considering that individuals with high communication apprehension may still communicate well despite their anxiety.

Statistical analysis also showed that communication apprehension predicts patient satisfaction with information. This may be a result of a patient's concern with a physician's affect, rather than the information he/she is given, thus he/she may overestimate his/her satisfaction with the information received during the interaction. In addition, a highly anxious patient may be grateful that he/she does not have to communicate with the physician, thus leading to an increase in satisfaction with information.

Perhaps the most important finding of this investigation was the existence of a curvilinear relationship between internal health locus of control and patient satisfaction with information. This finding serves as a bridge between the conflicting sets of research on health locus of control and patient satisfaction.

## Acknowledgements

There are several people who deserve to be thanked for their support and encouragement throughout these past two years. I would first like to thank Dr. Carlson for his patience and insight. Without his incredible intellect this thesis would never have come into fruition. Dr. Dwyer, thank you for always believing in me, and Dr. Rajaram, thanks for helping me to realize an alternate perspective.

To my friends and family, thank you, thank you for everything. Thank you to my significant other, David Whitt. Your encouragement and love has helped me to make it through the most difficult times. Finally, a special thanks goes to my mother, Lynn Keithly. You have truly been my rock. Without you I would have never made it this far.

## Table of Contents

Abstract.....	iii
Acknowledgements.....	iv
List of Tables .....	viii
List of Figures .....	ix
Chapter 1 .....	1
Introduction .....	1
Review of Literature .....	3
Health Communication .....	3
Patient Satisfaction.....	5
Methods for Studying Patient Satisfaction .....	6
Affective Patient Satisfaction .....	7
Relational Maintenance and Physician Competence.....	8
Locus of Control .....	11
Health Locus of Control .....	13
Communication Apprehension, an Overview.....	14
Communication Apprehension.....	15
Communication Apprehension in Physician-Patient Interactions .....	18
Purpose Statement .....	20
Chapter 2 .....	23
Methodology.....	23
Subjects.....	23

Setting .....	23
Instruments.....	24
Analysis of Data .....	25
Chapter 3.....	26
Results .....	26
RQ 1 .....	28
RQ 2 .....	30
Chapter 4.....	33
Discussion.....	33
RQ1 .....	35
RQ2.....	38
Chapter 5 .....	41
Conclusions.....	41
Limitations .....	42
Implications .....	43
Suggestions for Future Research.....	44
References .....	46
Appendix A.....	55
Institutional Review Board Approval.....	56
Appendix B.....	57
Questionnaire Instructions/Demographic Questions .....	58

Appendix C .....	59
The Patient Satisfaction Scale .....	60
Appendix D .....	61
The Multidimensional Health Locus of Control Scale .....	62
Appendix E.....	63
The Personal Report of Communication Apprehension with Physicians Scale .....	64

## **List of Tables**

<b>Table 1: Summary of Demographic Data.....</b>	<b>27</b>
<b>Table 2: Instrument Means, Standard Deviations, and Reliabilities .....</b>	<b>27</b>
<b>Table 3: Significant correlations between scales .....</b>	<b>29</b>
<b>Table 4: Multiple regression for dependent variable PRCAP and independent variable PSI .....</b>	<b>30</b>
<b>Table 5: One-way Analysis of Variance and Student Newman Kuels Procedure for scores according to college class.....</b>	<b>32</b>

## List of Figures

Figure 1: Plot of Nonlinear Relationship between IHLC with PSW .....	31
--	----

## Chapter 1

### Introduction

The area of patient satisfaction has been of increasing importance to health communication researchers for quite some time. Studies surrounding the effectiveness of patient-centered care have emerged during the last decade. However, it does not appear that the idea that a physician's purpose is to relay information and heal patients as best he/she can with as little interaction as possible has gone by the wayside. Unfortunately, studies into medical schools' attempts to educate their students of the value of communication have found that the idea of learning these skills is not given top priority (Wyatt, 1991). Further, other studies have proven that physicians do not learn how to communicate effectively by simply being exposed to it as is often done in today's fast paced world of medical school (Mason, Barkley, Kappelman, Carter, & Beachy, 1988).

However, a recent study indicates that health maintenance organizations, physicians, and insurance companies have begun to take an interest in this field of communication because effectively communicating with one's patients may be the difference between getting sued and not getting sued (Levinson, Roter, Mullooly, Dull, Frankel, 1997). In addition, since a speedier recovery is always cheaper, health outcomes and compliance levels are also being closely scrutinized by some corporations. Thus, a body of literature has been formed surrounding these ideas. A trend has been established which suggests that humans are social beings and thus they need social contact for healing and

survival, physicians who communicate more positively with their patients have patients who are healed faster and who are more satisfied with the medical interaction than physicians who do not use these skills.

Beyond the need for human comfort, different patients feel that they do or do not have a certain amount of control over the situation. Those who feel as if they have more control are more likely to ask questions about their illness and they have more knowledge about their illness, but they are usually less satisfied with their physicians (Wallston & Wallston, 1981).

However, another, more pervasive factor may be affecting patient satisfaction. Communication apprehension (CA) that is experienced by the patient may affect every aspect of the health communication process. The construct of CA was first recorded by the Greeks over 2,000 years ago. Although, the first serious research into the area began in the 1930s, the actual CA construct was articulated by James McCroskey in 1970 (McCroskey, 1997). Since that time, CA research has provided significant insight into its causes and effects.

This study attempts to research how a patient's CA and locus of control impact their satisfaction with physician-patient interactions. The following literature review discusses the history and definition of health communication, the trends that are reliable indicators of patient satisfaction, the characteristics that describe locus of control, and CA involved with physician-patient interactions.

## Review of Literature

### Health Communication

According to Henderson (1981), “communication can be defined as a process by which a person sends a message, verbal or nonverbal or behavioral stimuli to someone else with the conscious intent of evoking a response” (p. 4). Health communication is defined by Pettegrew and Logan (1987) as communication that “promotes health or illness within a society, makes the system run at optimal or marginal effectiveness, and can facilitate efforts to treat illness and prevent its recurrence”.

With this in mind, two definitions of health communication have developed in Western medicine. Health communication in the United Kingdom has been limited to interpersonal exchanges of *words* that occur in the health care setting. Whereas, in the United States and Australia the definition has been enlarged to include a more active approach of study. Specifically, it considers the part the entire *human interaction* plays in the process of health communication and health care (Kreps, 1989). As a result of broadening the definition of health communication, three main areas of research have emerged, doctor-patient communication, health information dissemination, and social support (Sharf, 1993). Of particular focus to this study is the area of doctor-patient communication.

Witte (1994) suggests that “health communicators have a tremendous ethical responsibility to first determine what appropriate health messages are

and then to craft their messages to promote health and prevent disease” (p. 288). Thus, she provides three means by which this task may be accomplished. First, once health communicators have chosen their health-related goal their messages must be formed in such a way as to communicate that goal effectively. Second, the area of health communication must be concerned with the “common good”. Finally, the “common good” standard should be conceptualized through community response (Witte, 1994).

Communication scholars need to focus on the first task outlined by Witte (1994), that of identifying the ultimate goal of the particular communication situation and then form the message in a way that communicates that goal. However, because of other factors, such as patient locus of control and CA, it is not always easy. Pendleton (1985) suggests that doctors hardly ever take the time, beyond the simple symptoms, to discover why patients come and see them. This can cause heightened CA and will negatively affect the interaction (Tuckett, Boulton, Olson, & Williams, 1985). It may also cause someone with an internal locus of control to be less satisfied (Wallston & Wallston, 1981). Paradoxically, sometimes the communication goal is achieved without using positive communication behaviors (Pendleton, 1985). It is phenomena like these that explain why the area of health communication is so essential. This type of research is also important to understanding human communication in general and, by studying this, health practitioners and the general public benefit enormously.

### Patient Satisfaction

The importance of positive physician-patient interactions becomes clearer with the realization that in less than half of the physician-patient interactions do physicians spend their time on technological information. Instead, most of their time is spent on afflictions dealing with psychological factors and the need for effective communication (Korsch & Negrete, 1972). By effectively managing these needs, physicians could elicit higher levels of patient satisfaction. Patient satisfaction is an increasingly important area of health communication that is being carefully researched by both communication scholars as well as by the medical profession. However, through a study of the medical profession's literature, Wyatt (1991) found that the two fields do not often merge because their research is typically found in two different types of journals. In addition, they do not often share the same language or focus when studying these issues. For example, when studying patient satisfaction, communication scholars focus on communication issues such as immediacy (Conlee, Olvera, & Vagim, 1993), affective satisfaction (Jackson, 1992), and physician communicator style (Burgoon, Birk, & Hall, 1991). The medical profession does not use communication variables. According to Wyatt (1991), "communication is not a legitimate term for Medline searches, so I identified articles related to physician-patient relationships" (p. 158). It is clear that the patient satisfaction research of communication scholars is not reaching health care practitioners.

Methods for studying patient satisfaction. Two different foci have been used to study patient satisfaction. The first approach looks at the general quality of health care received by the patient. Variables that are included in this type of research include socio-economic status, type of health care delivery system, and physician-patient communication. The second focus of patient satisfaction research conceptualizes patient satisfaction through physician-patient interaction patterns. This focus assumes that the satisfaction felt by a patient toward a specific physician may be predicted through studying interaction patterns (Burgoon et al., 1991). Kenny (1995) breaks interaction patterns even further by classifying them into two separate categories: affective and technical.

Communication scholars also break patient satisfaction down into three components. The three areas in which patients may feel satisfied with their physician are affective satisfaction, behavioral satisfaction, and cognitive satisfaction. Affective satisfaction includes friendliness, trust, and empathy. It has been proven that the construct of immediacy is a predictor of affective satisfaction (Conlee et al., 1993). Behavioral satisfaction involves whether or not the exam is rushed, and how it is performed (Jackson, 1992). Finally, cognitive satisfaction deals with how the information is explained by the practitioner to the patient (Pendleton, 1983). All of these satisfaction areas are extremely important to a patient's satisfaction. However they are not mutually exclusive. If the patient feels that the physician did not provide sufficient

information, yet still trusts him/her, the patient will report cognitive dissatisfaction and affective satisfaction (Jackson, 1992).

Although communication scholars have studied patient satisfaction in many different ways, this study will use Kenny's (1995) affective and technical classification of patient satisfaction. Consequently, the following literature review is concerned with both the affective and technical relationship of physician-patient interactions with patient satisfaction.

Affective patient satisfaction. Beyond the theoretical levels of patient satisfaction comes the ways in which satisfaction is affectively manifested by the physician and perceived by the patient. Ley (1988) stated that the physician/patient relationship is unsatisfactory for patients. This is unfortunate because the medical consultation is often the only mechanism by which healing may be initiated. However, research shows that patients who are more satisfied with their consultation felt that the physicians expressed concern and caring for their problems (Cegala, Socha McGee, & McNeilis, 1996). Before physicians may be able to effectively communicate with their patients, they must have an understanding of their patients' concerns, ideas, and expectations (Pendleton, Schofield, Tate, & Havelock, 1984).

One way in which this concern is manifested is through nonverbal communication. It is an essential aspect of the physician-patient relationship simply because the nonverbals used by the physician can provide the patient with valuable information regarding the nature of his/her affliction. In addition,

patients are especially conscious of health care providers' nonverbals because they are often afraid and confused about their condition and they're trying to make sense out of what is happening to them (Friedman, 1979). Of course, nonverbal communication is not the only way that patients perceive their physicians.

Burgoon and Burgoon (1990) have found that compliance, and the strategies employed by physicians to elicit compliance, are scarcely regarded as being beneficial to the physician. However, the relationship that the physician and patient create may be the strongest indicator of whether or not a patient will comply with the physician's orders (Zisook & Gammon, 1981). Further, studies have substantiated the hypothesis that a positive physician communicator style is associated with patient satisfaction (Burgoon et al., 1991; Cardello, Berlin Ray, & Pettey, 1995). Thus, it may be concluded that there is a direct relationship between positive patient-physician interactions, compliance, patient satisfaction, and health. All of these factors contain characteristics that may be associated with affective or technical satisfaction.

Relational maintenance and physician competence. A body of research that has developed that is similar to Kenny's (1995) technical satisfaction deals with physician competence. In addition, relational maintenance (an affective distinction) has been associated with physician competence (Conlee et al., 1993). Physician relationship maintenance has been conceptualized as nonverbal approachability and the use of small talk whereas professional

competence includes knowledge of the illness and its treatment, organization, expertise, intelligence, and honesty (Schneider & Tucker, 1992).

A study interested in isolating the communication factors that affect the physician-patient interaction found that professional competence, waiting time, social etiquette, and relationship maintenance most affect the outcome of the physician-patient relationship. It was concluded that, of the four factors, relationship maintenance and professional competence were the highest predictors of a positive or negative interaction (Schneider & Tucker, 1992). An explanation of the relationship between these two factors may be that, although patients prefer having a physician who effectively communicates with them, they also feel more comfortable with one who clearly has knowledge of their problem.

The behaviors associated with relationship maintenance and professional competence have been correlated with patient satisfaction in other studies. Health care providers that communicate immediacy to their patients had patients who were more satisfied with the interaction and the care they received (Conlee et al., 1993). In addition, physicians that were perceived as being non-dominant, capable of explaining information effectively, relaxed, and animated were seen as being more empathetic and able to facilitate patient understanding (Cardello et al., 1995). In a study exploring patients' and physicians' perceptions of competence during the medical consultation, Cegala, Socha McGee, & McNeillis (1996) found a relationship between competence and patient satisfaction. A competent physician was conceptualized as one who sought information from

and provided information to patients regarding their illnesses, treatments, test results, and histories. Patients who perceived a physician as being competent reported more satisfaction with their medical consultation. Further, the definition of a competent physician also included a relational dimension. This was described as a physician who was supportive, created a friendly atmosphere, and was caring. Again, a positive relationship between satisfaction and perceived physician relational competence was found (Cegala et al., 1996). Although these two competence dimensions are not directly parallel to Kenny's (1995) affective and technical communication skills, there does seem to be a congruency with the patient satisfaction literature.

There also seems to be a relationship between time of visit, length of consultation, and how much patients perceived their requests as being fulfilled and patient satisfaction. Patients that were seeing the physician for the first time reported less satisfaction than those who had seen the same physician more than once. Those patients who engaged in quality communication with their physicians yet whose consultations took only fifteen minutes were more satisfied than patients whose consultations did not last that long. Studies have found that patients involve themselves in their own healing process by trying to understand their symptoms before they see their physician (Helman, 1978). As a result, they have formulated a number of requests that they would like to have met during the medical encounter. This idea corresponds with Kenny's (1995) final

conclusion that patients who did or did not receive biomedical treatment were satisfied with their physicians when they felt that their requests were being met.

Rather than dividing patient satisfaction into affective and technical components, Jackson (1992) includes patient satisfaction as one of five components of health outcomes. Her study looked at how the use of technical language affected the physician-patient interaction. The other four components included as part of health outcomes are compliance, comprehension, recall, and credibility. Technical language was found to negatively influence cognitive satisfaction, comprehension, and recall. Patients reported intent to comply and perceptions of physician credibility were not affected by the use of technical language (Jackson, 1992).

Obviously, there is an important connection between positive physician communication and patient satisfaction. However, the medical consultation is an extremely complex event. There are far too many variables that are involved than can be discussed here. One aspect of the interaction that has not received much attention is that of the patient's perceived control over the situation and how that may affect their satisfaction level. What follows is a brief overview of the locus of control and the health locus of control constructs.

### Locus of Control

The construct of locus of control has its roots in Rotter's social learning theory (Wallston & Wallston, 1978). This construct has proven itself to be extremely flexible in its application to other phenomena. In fact, locus of control

has been used to predict the outcome of certain systems (Lefcourt, 1983a) and when predicting complex behaviors it is often seen as a moderator or interactive variable (Lefcourt, 1983b). Its usefulness may be a product of its bipolar characteristic. When using this construct as a description of a personality type, an individual is classified as either having an external or internal locus of control. Although locus of control is historically thought of as a personality trait, current research points to a construct that is flexible according to the context in which it is being applied (Skinner, 1995).

Locus of control can be conceptualized as a need for competence (sense of control). The pervasiveness of the individual's need for competence dictates how much control that individual feels he/she must have over the situation. There are two competing research approaches that attempt to explain the locus of control construct. One approach argues that an individual's need for competence is set by his or her genetics while the other purports that locus of control depends on the degree of socialization. Both of these views would explain why the need for competence varies depending on the individual, however studies have shown that the need for control changes according to age (i.e. children exhibit the need for control more than adults) (Skinner, 1995).

What does not appear to be debatable is the external-internal nature of this construct. Those who have internal locus of control are more likely to feel like they have direct control over their lives. Thus, they appear to adapt more successfully to situations that respond to their control than they do to situations

that they cannot control. Externals prefer situations that do not respond to control attempts. In addition, externals are more comfortable in situations that seem to be controlled by chance whereas internals prefer situations that require them to use their skills as a form of control. These tendencies also apply to health related situations. Internals are more likely than externals to seek out information about their health, illnesses, and health maintenance (Sandler, Reese, Spencer, & Harpin, 1983). Therefore, *health* locus of control is defined as the “belief about where one’s control over health resides” (Kennedy, Probart, Dorman, 1991, p. 321).

Health locus of control. Whereas the locus of control construct classifies individuals based on an internal or external distinction, health locus of control classifies people as having internality, chance externality, or powerful others externality (Wallston & Strudler Wallston, 1981). The differences between these three classifications can be illustrated by looking at intervention programs that are designed to educate individuals about their illnesses. Those with high internality benefited from these programs because they believe they are responsible for their health, but those who can be classified as having chance externality felt that they had no control over their health. Therefore, the information did not benefit them. Nor did the information benefit those with powerful others externality because they felt that their physicians had control over their health (McCann & Weinman, 1996).

Although high internals do take control of their health, depending on the illness, this may or may not be an advantage. Those patients with high internality were more likely to be depressed, have mood swings, and stop their treatment when attempts to control their illnesses have failed (Skinner, 1995; DuCette, 1974 as cited by Wallston & Wallston, 1981). In addition, high internals were often less satisfied with the medical consultation than were their external counterparts (Seeman & Evans, 1962). Therefore, it is possible that the anxiety caused by the perceived need for control may increase during the medical consultation.

All of the factors of health communication discussed above do affect the quality of the medical interaction but, even if a physician takes all of them into account, a patient's communication anxiety may circumvent those efforts. Individuals experience CA in all situations for all kinds of reasons. A review of communication apprehension is followed by a brief discussion of CA in physician-patient interactions.

### Communication Apprehension, an Overview

Communication anxiety covers a wide gammet of constructs associated with behaviors and cognitions that affect the quality of communication interactions. The question of what actually causes these constructs is one that has been asked by theorists for several decades. Although there appears to be some overlap in the definitions, much progress has been made in delineating the constructs of willingness to communicate, reticence, shyness, and

communication apprehension. However, this review will be concerned with CA only.

Communication Apprehension. Communication apprehension (CA) is defined by McCroskey (1992) as, “the fear or anxiety associated with either real or anticipated communication with another person or persons” (p. 174). Although CA has been studied under the rubric of communication, the constructs of communication anxiety and communication skills are not interchangeable. They differ in that CA is affective, while communication skills are behavioral. In fact, an individual may avoid communication at all costs because of anxiety or fear, but when forced to communicate, that same individual may actually possess good communication skills (Berger & McCroskey, 1982). Stage fright is the most often used example to illustrate the nature of CA. However, stage fright is only a form of CA. Actual CA can translate into a fear of any type of communication situation for the person who is experiencing it (Kelley, 1982).

Early definitions of communication apprehension separated it into a dual level explanation. These definitions suggested that a person may experience CA as a result of a personality orientation (trait) or because of the communication situation (state). Instead of placing people into the general category of communication apprehension, researchers were attempting to discover the causes of CA (McCroskey, 1997). Some would disagree that state CA even exists. Many scholars have argued that an individual's level of CA has less to do with the situation and more to do with their own traits (Beatty, Behnke,

& McCallum, 1978; Parks, 1980), however, recent research has shown that there are five distinct types of communication apprehension. They are trait-like CA, generalized-context CA, person-group CA, situational CA, and pathological CA (McCroskey, 1997).

Trait-like communication apprehension is defined as a “relatively enduring personality-type orientation toward a given mode of communication across a wide variety of contexts” (McCroskey, 1997, p. 85). Although initial definitions of CA identified trait CA as a possible cause of communication anxiety, the current construct of trait-like CA differs from the original definition. Whereas trait CA suggests that one is born with apprehension and cannot overcome it, trait-like CA implies that people can change their anxious tendencies, even after they have reached adulthood (McCroskey, 1997).

Generalized-context CA is similar to trait-like CA in that both are relatively enduring, however they differ in that generalized-context CA is only experienced across one specific communication context rather than in every communication circumstance. There are four types of communication contexts that have been identified as generalized-context CA. They are: small groups, public speaking, meetings or classes, and interpersonal. Unless the individual experiencing this type of CA participates in an intervention program, his/her CA will endure over time (McCroskey, 1997).

The third type of CA that has been identified by researchers is person-group CA. This can be experienced while talking to a certain person or group of

people. It is dynamic in that the level of anxiety can change depending on a group's or person's reaction with the speaker (McCroskey, 1997).

Situational CA is defined by McCroskey (1997) as a "transitory orientation toward communication with a given person or group of people" (p. 87). This may vary depending on the context, the audience, and the time at which the communication situation occurs. It has been estimated that 95% of the United States' population have experienced CA when presented with a certain situation, or while speaking to certain individuals (McCroskey, and Richmond, 1982).

Finally, pathological CA is also known as abnormal CA. Pathological communication apprehensives are known for responding to a communication situation in the opposite manner often presumed to be normal. Whereas "normal" people would feel no anxiety in a non-threatening environment, someone experiencing pathological CA may feel threatened in a non-threatening environment and react accordingly (McCroskey, 1997).

Sorensen and Christophel (1992) suggest that those experiencing anxiety in the classroom are often perceived more negatively than those not exhibiting apprehensive behaviors. It is safe to assume, then, that individuals demonstrating apprehensive tendencies during the medical interaction could also be perceived negatively by health care practitioners. This could affect the quality of communication that occurs between the physician and the patient. Especially since research has shown that when presented with a speaking and nonspeaking alternative, high communication apprehensives will choose the

nonspeaking option (Beatty, 1987). This is analogous to the “fight or flight” response (McCroskey & Richmond, 1987). Therefore, if patients with high CA are not thoroughly questioned by their health care practitioners, they may choose the “flight” response. Thus, the quality of the health care could suffer because the patient has not given his/her physician all of the information necessary to expedite the healing process. It is “the potentially catastrophic nature of ineffective communication between patients and physicians [that] justifies investigation into the influence of CA in this setting” (Ayres, Colby-Rotell, Wadleigh, & Hopf, 1996, p. 87). What follows is a discussion of the literature surrounding this area of communication research.

Communication apprehension in physician-patient interactions. As discussed previously, there are many factors that are related to effective communication between physicians and patients, however communication apprehension may be *the* factor that permeates all aspects of those interactions. For example, a person experiencing high levels of CA will probably feel even more anxious if his or her health care practitioner lacks compliance gaining or interpersonal communication skills. Although these feelings may dissipate over time, interactions with a new physician may cause heightened levels of CA (Kenny, 1995). This is unfortunate, because with the advent of the health maintenance organization it is less likely that a patient will have the opportunity to build rapport with a particular physician. Instead, people are often forced to bounce from one physician to another depending on which one is available at

the time. Therefore, the CA associated with first time visits may be more traumatizing to the healing process than previously thought.

Studies have shown that those with high CA will not self-disclose to their significant others (McCroskey & Richmond, 1977). This makes it even more unlikely that an individual suffering from high CA will self-disclose to a physician, even if that person has been to the same physician over and over. Further, many people feel that they are not in control of their situation or environment during a medical consultation (Friedman, 1979). This idea is highly correlated with CA.

Patients are often unhappy with the interactions that occur between themselves and their physicians (McCann & Weinman, 1996). Tuckett, Boulton, Olson, & Williams (1985) found that during most medical consultations physicians did not ask patients about their illnesses. During the same study, when patients attempted to provide information about their illness the physician avoided or prohibited their statements. Perhaps it is this type of situation that would cause individuals with high CA to allow their physicians to diagnose them without providing all of the relevant information.

Sledge, Lieberman, & Whisnant-Reiser (1987) defines the doctor-patient relationship as a “concrete interaction where stressors come to bear on the resident and is a critical factor both in the patient’s recovery and in the resident’s professional satisfaction” (p. 188). In other words, the communication event causes the health care practitioner to react to the patient. In the case of a

patient experiencing high CA, this interaction may be negatively affected because people, including physicians, will often reciprocate that behavior even if they are not experiencing CA themselves.

The interactions that occur during a medical consultation are extremely complicated. As seen through this review of literature, many factors affect the nature of the outcome of that interaction. This study will address some of the issues involved in this communication process, particularly the connection between CA, patient satisfaction, and health locus of control.

### Purpose Statement

Research in health communication has developed rapidly over the past thirty years. However, very little of the research has manifested itself into practical applications. Very often, physicians do not take the time to positively communicate with their patients and patients may be too anxious to try. However, those who exhibit high internality over their health will be more likely to communicate with their physicians by asking questions or gathering information about their illnesses beforehand, but they may experience apprehension if they do not feel they have control over their illnesses. This may be reversed through positive physician-patient interactions. Since health care practitioners spend the majority of their time attempting to reconcile afflictions caused by psychological factors, the importance of positive physician-patient interactions associated with effective communication becomes self-evident (Korsch & Negrete, 1972).

Lower levels of CA and higher levels of patient satisfaction may help increase two critical aspects of patient care. That of increased compliance to physician's orders and improved health outcomes. In addition, physicians who are skilled in deciphering their patients' nonverbal communication are much more likely to have a positive interaction with their patients. Also, by consciously using communication skills that have been associated with patient satisfaction, physicians are able to more effectively communicate with their patients. Since patients often know little about their conditions, they frequently look toward any communicative clues in order to make sense out of the situation. Thus, physicians who use appropriate communication skills will help patients paint a clearer picture of their situation. Therefore, patient-satisfaction should increase.

Ultimately the patient's health may be negatively affected as a result of a negative interaction with his/her health care practitioner. This negative interaction may be further affected by a patient's locus of control and/ or high CA level. Thus, it is likely that lower levels of patient satisfaction and higher levels of internality and CA correspond with less desirable health outcomes.

It is clear through the review of literature that there is a lack of research that has been conducted in this area. This is an area of communication research that must be researched, especially in this age of expensive medical care. It seems obvious that healing patients physically as well as psychologically will, in turn, affect the rates of mortality and morbidity in this country. The purpose of this study is to research the effects of patient CA on

patient satisfaction. The health locus of control construct will be studied as a related variable to find out if it is correlated with CA and/or patient satisfaction levels.

Specifically the current study will examine the following research questions,

RQ1: What is the relationship between a patient's level of communication apprehension in physician-patient interactions and his/her health locus of control.

RQ2: Does a patient's health locus of control and communication apprehension predict patient satisfaction in physician-patient interactions?

## Chapter 2

### Methodology

#### Subjects

The participants of this study were chosen from five beginning public speaking classes. This course is taught in the communication department at a large Midwestern university.

#### Setting

The scales were distributed to the participants during their regularly scheduled class times. The researcher provided a short description of the study to the subjects before the scales are distributed. An explanation of how the scales should be filled out was given. Subjects answered the questions based on their last experience with a physician and they were told that all information will be kept anonymous. The researcher also told the participants that they had the option of not participating in the study. Institutional Review Board approval was obtained by the researcher before this study was undertaken (Appendix A).

The scales took approximately ten minutes to complete. Subjects were provided with a four-page packet. Page one contained a brief description of the study that also included one demographic question and a question asking the participants to provide the reason for their visit (Appendix B). Page two included the Multidimensional Health Locus of Control scale. Page three was a copy of the Patient Satisfaction scale. Finally, page four was the Patients Report of Communication Apprehension with Physicians (PRCAP) instrument.

### Instruments

The Multidimensional Health Locus of Control scale (MHLC) is a self-report measure that assesses an individual's internal, and chance and powerful others external health locus of control (Wallston & Wallston, 1978). The MHLC, form B was used in the study (Appendix C). The instrument uses eighteen items in a six-point Likert-type format that ranges from Strongly Agree (scored as six) to Strongly Disagree (scored as one). This scale contains three sub-scales. The first sub-scale measures internal health locus of control (IHLC), the second measures powerful others health locus of control (PHLC), and the third measures chance health locus of control (CHLC). Items one, six, eight, twelve, thirteen, and seventeen form the IHLC sub-scale. The PHLC sub-scale is composed of items three, five, seven, ten, fourteen, and eighteen. Questions two, four, nine, eleven, fifteen, and sixteen constitutes the CHLC sub-scale. Three separate scores are calculated based on the sub-scales. One overall score is not assigned (Wallston & Wallston, 1978).

The second instrument measures a patient's level of interpersonal warmth/empathy and communication/information satisfaction with his or her doctor's visit (Kenny, 1995). Kenny's (1995) patient satisfaction scale (PS) was utilized in this study (Appendix D). This instrument is made up of seventeen items arranged in a four-point Likert-type format ranging from very much so (scored as four) to not at all (scored as one). Questions one through fourteen

forge the interpersonal warmth/empathy sub-scale, while items fifteen through seventeen constitute the communication/information sub-scale (Kenny, 1995).

The final scale used in this study, the Patients' Report of Communication Apprehension with Physicians (PRCAP) (Appendix E), is a modification of the Personal Report of Communication Apprehension's (PRCA) interpersonal CA questions that measure a patient's communication apprehension with a physician (Ayers et al., 1996).

### Analysis of data

For research question 1 - What is the relationship between a patient's level of communication apprehension in physician-patient interactions and their health locus of control? – Pearson correlations were used to test for the relationship between patient communication apprehension as measured by the PRCAP and health locus of control as measured by the three scales of the MHLC.

For research question 2 - Does a patient's health locus of control and communication apprehension predict patient satisfaction in physician-patient interactions? - a multiple regression analysis was used to test for a relationship between the dependent variable of patient satisfaction as measured by the PS and its two subscales and the independent variables of health locus of control as measured by the three scales of the MHLC and patient communication apprehension as measured by the PRCAP.

## Chapter 3

### Results

A total of 114 surveys were returned from five public speaking fundamentals courses. Of those, 11 were either incomplete or had been filled out improperly, 103 surveys remained.

All general demographic data, with the exception of “date of last physician visit”, is presented in Table 1. Since the dates reported by the subjects encompassed such a wide range, date was not considered in this analysis. Forty-eight males and 45 females responded to the surveys (N=103). In order to equalize cell sizes, age and class were collapsed into four and three categories respectively. Respondents aged 18 or younger totaled 29, while 26 were 19 years old. Subjects between the ages of 20 to 21 equaled 21, and 27 subjects over the age of 22 responded to the survey. The average age of the subjects was 20.94 (s.d.=4.64). Class was collapsed into three categories: Freshmen (N=57), Sophomores (N=20), and Juniors and Seniors (N=25). One subject did not identify his/her class standing (Table 1).

Subjects who reported that their last physician visit was a routine/preventative visit (Category One) totaled 34, while 22 had gone to their physician’s office because of a preexisting, known illness/injury (Category Two). Subjects who went to their physician because of symptoms of an unknown cause (Category Three) equaled 26 and those visiting for other reasons (Category Four) added up to 21 (N=103).

**Table 1****Summary of demographic data (N=103)**

<b>Gender</b>	<b>Age</b>	<b>Class</b>	<b>Reason for Visit</b>
Male – 48	18 or younger – 29	Freshmen – 57	Category One – 34
Female - 55	19 years old - 26	Sophomores – 20	Category Two – 22
	20 to 21 – 21	Juniors & Seniors - 25	Category Three – 26
	22 or older - 27	Unidentified - 1	Category Four - 21

The mean of subjects' internal health locus of control ( $M=26.73$ ,  $s.d.=3.67$ ) was higher than their powerful others ( $M=18.80$ ,  $s.d. 4.29$ ) or chance others health locus of control ( $M=17.86$ ,  $s.d.=4.59$ ). Individuals scored an average of 18.16 on the PRCAP ( $s.d.=3.90$ ). Satisfaction with the overall physician-patient encounter (PS) averaged 55.77 ( $s.d.=9.51$ ). The scores for the patient satisfaction subscales averaged 45.76 ( $s.d.=8.20$ ) for satisfaction with physician warmth (PSW) and 10.00 ( $s.d.=1.71$ ) for satisfaction with information received from the physician (PSI). This information is presented in Table 2.

**Table 2****Instrument means, standard deviations, and reliabilities.**

<b>Instrument</b>	<b>M</b>	<b>S.D.</b>	<b>Alpha</b>
IHLC	26.73	3.67	.61
PHLC	18.80	4.39	.62
CHLC	17.86	4.59	.66
PRCAP	18.16	3.90	.79
PS	55.77	9.51	.94
PSW	45.76	8.20	.94
PSI	10.00	1.71	.70

In order to test the reliability of the scales used in this study, Cronbach's alpha was employed. The IHLC, PHLC, and CHLC instruments were marginally reliable. ( $\alpha=.61, .62, .66$ , respectively). With an alpha of .79, the PRCAP was found to be a reliable scale. The PS scale and its two sub-scales, the PSW and the PSI, had alpha's that also indicated the reliability of these instruments ( $\alpha=.94, .94, .70$ , respectively, Table 2).

To determine if there were any gender differences in scale scores, t-tests were run. No significant differences ( $p<.05$ ) were found in scores between males and females on any of the scales (IHLC, PHLC, CHLC, PS, PSW, PSI, PRCAP).

RQ1: What is the relationship between a patient's level of communication apprehension in physician-patient interactions and his/her health locus of control?

Originally this question was created with the purpose of looking at the relationships between a patient's communication apprehension and his/her locus of control. No significant correlations were found between the PRCAP and the IHLC, PHLC, or CHLC. As a result, this investigation was expanded to include the patient satisfaction scales of PS, PSI, and PSW scales.

There was no significant correlation found between the PRCAP and the PSW scale. However, significant correlations were found between the PRCAP and the PS scale ( $r=.23, p=.05$ ) and between the PRCAP and the PSI component of the PS scale ( $r=.35, p=.01$ ) (Table 3) indicating a positive

relationship between patient communication apprehension and overall patient satisfaction as well as between patient communication apprehension and patient satisfaction with information.

None of the health locus of control scales (IHLC, PHLC, CHLC) correlated with the patient satisfaction (PS) scale or its subscales (PSI, PSW). The PHLC did show a positive correlation with the CHLC scale ( $r=.44$ ,  $p=.01$ ) indicating a positive relationship between the two constructs of chance and powerful others locus of control (Table 3).

The PSI and the PS scales were correlated with the PSW scale and with each other. The PSI showed a  $.70$  ( $p=.01$ ) correlation with the PSW, while the PS scale resulted in a  $.99$  correlation ( $p=.01$ ) with the PSW. The PS and PSI were positively correlated ( $r=.78$ ,  $p=.01$ ) (Table 3).

**Table 3**

**Significant correlations between scales.**

	PRCAP	IHLC	PHLC	CHLC	PSI	PSW	PS
PRCAP					<b>.35**</b>		<b>.23*</b>
IHLC							
PHLC				<b>.44**</b>			
CHLC			<b>.44**</b>				
PSI	<b>.35**</b>					<b>.70**</b>	<b>.78**</b>
PSW					<b>.70**</b>		<b>.99**</b>
PS	<b>.23**</b>				<b>.78**</b>	<b>.99**</b>	

\* $p=.05$ .

\*\*  $p=.01$

**RQ2: Does a patient's health locus of control and communication apprehension predict patient satisfaction in physician-patient interactions?**

A stepwise multiple regression analysis was conducted to answer this question. The dependent variables were patient satisfaction (PS) and the patient satisfaction sub-scales (PSI and PSW), while the independent variables were the locus of control scales (IHLC, PHLC, and CHLC) and the PRCAP. No linear relationship was found between the patient satisfaction scale or its sub-scale of PSW and patient communication apprehension as measured by the PRCAP. In addition, no linear relationship was found between any aspect of health locus of control or the overall patient satisfaction scale or its PSW sub-scale. However, a significant relationship was found between the PSI scale and the PRCAP ( $p=.0003$ ,  $df=1$ ) (Table 4).

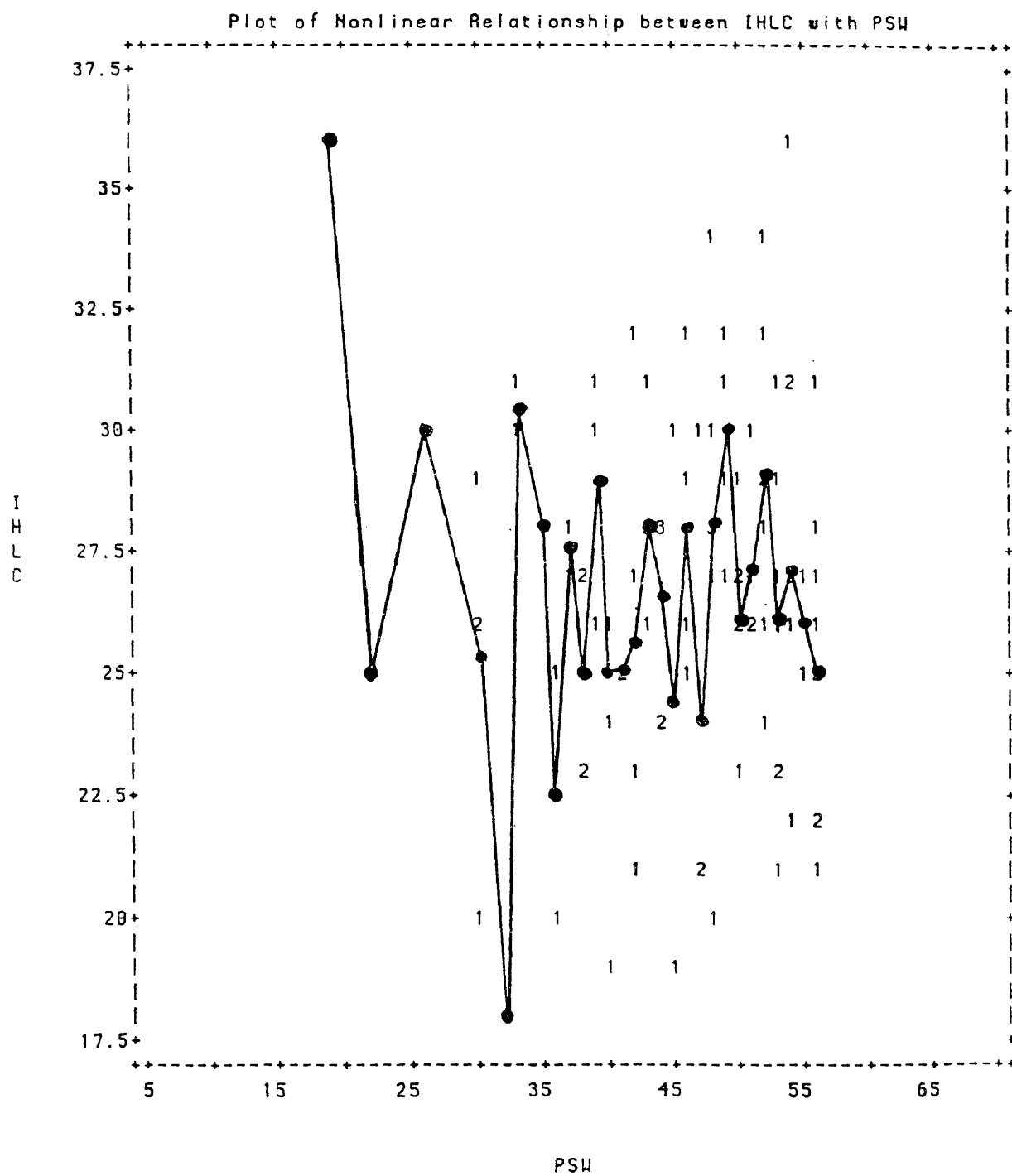
**Table 4**

**Multiple regression for dependent variable PRCAP and independent variable PSI.**

<b>Variable</b>	<b><i>df</i></b>	<b>MS</b>	<b><i>F</i></b>	<b><i>p</i></b>
PSI	1	188.99	14.00	.0003
Residual	100	13.50		

In addition, tests of nonlinear relationships (eta) were conducted between the various pairs of variables. One significant nonlinear relationship was discovered between internal locus of control, the IHLC scale, and a patient's satisfaction with information, the PSI scale (see Figure 1).

Figure 1



To determine if there were any scale score differences based on the demographic characteristics of age, class and reason, one-way analyses of variance with follow-up Student Newman Kuels Procedure were utilized. Only one significant difference was found: sophomores scored higher on the PSI subscale than did freshman or juniors/seniors (Table 5).

**Table 5**  
**One-way Analysis of Variance and Student Newman Kuels Procedure for PSI scores according to college class.**

<b>Source</b>	<b><i>df</i></b>	<b>MS</b>	<b><i>F</i></b>	<b><i>p</i></b>
Between Groups	2	8.6312	3.0456	.0521
Within Groups	98	2.8340		
Total	100			

**Student Newman Kuels Procedure:**

<b>Groups:</b>	<b>Group 1</b>	<b>Group 2</b>	<b>Group 3</b>
<b>Means:</b>	9.7544	10.8421*	9.8800

\*Denotes pairs of groups significantly different.  $p \leq .05$ .

## Chapter 4

### Discussion

Viable responses were obtained from 103 subjects in a total of five fundamentals of public speaking classes. Subjects were almost equally divided between males and females (N=48 and 45, respectively). The sample was comprised of mostly Freshmen (N=57). Sophomores and Juniors and Seniors were divided fairly evenly (N=20 and 25, respectively). Interestingly, although Freshmen made up the largest sub-population, age was evenly distributed among the four different categories of 18 and younger, 19 years old, 20 to 21, and 22 or older (N=29, 26, 21, and 27, respectively). This even distribution of student age is consistent with the overall student population of this particular university (University of Nebraska at Omaha, 1997-98). Subjects were almost evenly divided according to their reason for visit. Those visiting the physician for a routine/preventative visit (Category One) equaled 34, while those seeing the physician for a preexisting, known illness/injury (Category Two) added up to 22. Those visiting because of symptoms of an unknown cause (Category Three) totaled 26, whereas those visiting for other reasons (Category Four) totaled 21.

According to the means of the IHLC, PHLC, and CHLC scales (M=26.73, 18.80, 17.86, respectively), subjects appeared to have a higher internal health locus of control than they did powerful others or chance others health locus of control. These means are representative of the results reported in the genesis study of the IHLC, PHLC, and CHLC scales (M=25.30, 20.97, 15.46,

respectively) (Wallston, et al., 1978). In addition, subjects appeared to experience very little apprehension with their physicians as it was measured by the PRCAP ( $M=18.16$ ) if their average is compared to the total of 21 that one would receive if the subject did not experience any apprehension while communicating with his/her physician. Finally, subjects' satisfaction with their last physician/patient interaction was high ( $M=55.77$ ). This trend continued into the PSW and PSI subscales ( $M=45.76$ ,  $10.00$ , respectively).

The reliability of the IHLC, PHLC, and CHLC scales were marginal ( $\alpha=.61$ ,  $.62$ ,  $.66$ , respectively). The reliabilities reported for Form B in the original study were as follows: IHLC  $\alpha=.71$ , PHLC  $\alpha=.72$ , and CHLC  $\alpha=.69$  (Wallston, et al., 1978). Although the reliabilities reported in the present study are lower than the reliability scores reported by Wallston, Wallston, and DeVellis (1978), they repeat the trend of lower reliabilities established by the original study. However, when both Form A and Form B were combined in the original study, reliabilities increased substantially (IHLC  $\alpha=.86$ , PHLC  $\alpha=.83$ , CHLC  $\alpha=.84$ ) (Wallston, et al., 1978).

The PS scale and its subscales, the PSW and PSI were found to be reliable ( $\alpha=.94$ ,  $.94$ ,  $.70$ , respectively). These reliabilities correspond with the reliabilities reported by Kenny (1995) in the original study which were as follows: PS  $\alpha=.95$ , PSW  $\alpha=.97$ , PSI  $\alpha=.78$ . Finally, although its reliability coefficient was not as high as the reliability reported by Ayres, Colby-

Rotell, Wadleigh, and Hopf (1996) ( $\alpha=.83$ ) in the genesis study, the PRCAP did exhibit acceptable reliability in the present study ( $\alpha=.79$ ).

RQ1: What is the relationship between a patient's level of communication apprehension in physician/patient interactions and his/her health locus of control?

There were no significant differences found between communication apprehension in the physician/patient interaction and internal, powerful others, or chance others health locus of control. Since the literature was contradictory on this matter, this result is not entirely surprising. Some research shows that individuals with an internal health locus of control are more likely to respond positively to situations that appear to be responsive to their control efforts. However, those with an external locus of control (classified as chance or powerful others in this investigation) respond well to situations that are not controllable (Sandler, et al., 1983). The assumption here was that when an individual with an internal locus of control is confronted with an uncontrollable situation he or she will respond with anxiety. It was thought that the physician-patient interaction would be such a situation. However, the results of the present study call those assumptions into question. Currently it is impossible to determine whether or not the physician-patient interaction would be classified as an uncontrollable situation. If it was interpreted as unresponsive to control attempts, then those with an internal health locus of control would have experienced more communication apprehension in the physician/patient

interaction and those with a powerful others or chance health locus of control would not have been anxious. The answer to this was probably yes and no depending on the individual's experiences with that physician. According to Kenny (1995), patients were less satisfied with their physicians if it was their first visit than if it was a later visit. Perhaps the unsatisfied patients also experienced more apprehension with the physician and that contributed to their unhappiness. Although this inquiry did not investigate this type of relationship, it warrants further investigation.

Another explanation may be plausible. When internals are confronted with a situation in which their normal response of attempting to gain control does not suffice, rather than experiencing anxiety over that interaction, internals may instead hand over their control (DuCette, 1974 as cited by Wallston & Wallston, 1981). As a result, the physician would take over the interaction and the patient would follow the "doctor's orders".

A significant relationship between communication apprehension in the physician/patient interaction and powerful others and/or chance others health locus of control was not expected because, as stated previously, those with an external locus of control respond more favorably to situations that are perceived as uncontrollable (Sandler, et al., 1983). Perhaps the assumption that the physician-patient interaction would be interpreted as uncontrollable was not an inaccurate one in the context of external locus of control.

In order to broaden this research, patient satisfaction was added to the analysis. Interestingly, a positive correlation was found between the PRCAP and the PS and the PSI scales. These findings are extremely surprising. The assumption was that if any relationship existed between patient satisfaction and patient communication apprehension it would be a negative one. However, this does not appear to be the case. According to the results of the present study, as satisfaction with a physician increases so does a patient's communication apprehension. Although these results contradicted much of the literature on communication apprehension in the physician/patient interaction and patient satisfaction (i.e., Ayres, et al., 1996, Booth-Butterfield, Chory, & Beynon, 1997, Smith-Dupre, & Beck, 1996), two explanations may exist. First, in their research on communication apprehension and behavior, Allen and Bourhis (1996) purported that although an individual may have communication apprehension in certain situations, this does not necessarily mean that he/she does not communicate well. Similarly, in the physician-patient interaction a patient may avoid the situation all together. However, if the individual has no choice in the matter and he/she must meet with a physician, that person may communicate very effectively with the physician by asking questions, listening attentively, gaining valuable information, etc. As a result, even though the individual's communication apprehension is high, his/her satisfaction with the information received and with the overall interaction is also high because that person was able to assume the role of the patient and communicate well with the physician.

A second explanation for this finding exists within the uncertainty literature. While investigating the relationship between uncertainty, information seeking, and receiver apprehension, Schumacher and Wheelless (1997) hypothesized that if receiver apprehension leads to uncertainty and uncertainty leads to uncertainty reduction in the form of information seeking, then someone with receiver apprehension will attempt to gain information about the anxiety producing interaction in an effort to reduce his/her apprehension. Although their assumptions were not supported through statistical analysis, the results of this analysis may support their hypothesis. Thus, someone who experiences communication apprehension in this context may attempt to reduce his/her anxiety by seeking information from the physician. This may then lead to more satisfaction with the overall and the informational aspects of the physician/patient interaction.

RQ2: Does a patient's health locus of control and communication apprehension predict patient satisfaction in physician-patient interactions?

The answer to this question is yes and no. A patient's communication apprehension does not predict his/her overall satisfaction or his/her satisfaction with the interpersonal aspects of the physician/patient interaction. However, a relationship was found between communication apprehension in the physician/patient interaction and patient satisfaction with information. The multiple regression analysis showed that communication apprehension predicts patient satisfaction with information. As with the correlation between these two

variables, the relationship is positive. Thus, as an individual experiences more communication apprehension in this context his/her satisfaction with information also increases.

During physician-patient interactions often patients are much more concerned with the manner in which they are treated and are less concerned with the information they are receiving (O'Hair, Behnke, & King, 1983). This may explain why, in this investigation, a patient's apprehension can predict his/her satisfaction with information. If a physician's affect toward a patient is more important, perhaps patients are not fully attending to the information they are receiving. Therefore, patients do not have a real sense of how they felt about the informational aspects of the interaction and this may cause them to overestimate their satisfaction.

A second explanation for this relationship exists within the communication apprehension literature. Research has shown that when an individual with oral communication apprehension is forced to communicate that person's anxiety also increases (Beatty, 1987). In situations like the physician-patient interaction patients are often not called upon by the physician to openly discuss their reasons for the visit. Usually the physician will communicate with the patient only when he/she is attempting to learn the symptoms that are afflicting the patient (Pendleton, 1985). Although this may cause heightened CA for someone with an internal locus of control (Wallston & Wallston, 1981), individuals who experience CA in all physician-patient interactions may be much more

comfortable when they are not required to hold a discussion with their physicians. Thus, if the physician does not request more information from this type of patient, then the patient will be more satisfied with the informational aspect of the interaction because he/she was able to receive information from the physician in a non-threatening manner.

A second, extremely interesting, finding also resulted from the eta test. The analysis proved that there is a curvilinear relationship between internal health locus of control and patient satisfaction with warmth. This means that individuals with an internal health locus of control may be either very satisfied *or* very dissatisfied with the physician-patient interaction. This is an exciting finding because it serves as a bridge between the conflicting evidence presented in the health locus of control literature. For example, in a study investigating how health locus of control effects information seeking, it was noted that internals expressed more dissatisfaction for the amount of information they were receiving from their health care providers (Seeman & Evans, 1962). However, internals that had been placed in the cardiac treatment ward of a hospital were less depressed and more cooperative than externals (Cromwell, Butterfield, Brayfield, & Curry, 1977). These studies provide inconsistent findings of the effects of internal locus of control on satisfaction in the physician-patient interaction. This research, however, may be the key to these inconsistencies.

## Chapter 5

### Conclusions

The purpose of this thesis was to determine what types of relationships existed between the constructs of health locus of control, patient satisfaction, and patient communication apprehension. The results were both surprising and exciting.

Research question one asked what the relationship was between a patient's communication apprehension and his/her internal, external, and/or chance others health locus of control. No significant relationships were found. However, a positive relationship between patient communication apprehension and patient satisfaction with information and satisfaction with the overall interaction exists. This was fascinating and difficult to explain. This finding may be attributed to a patient's ability to communicate effectively despite his/her apprehension or to uncertainty reduction techniques (i.e. information seeking).

A second purpose of this thesis was to also determine whether or not patient satisfaction could be predicted based on a patient's communication apprehension and/or his/her health locus of control. It was proven that a patient's communication apprehension could predict his/her satisfaction with the informational aspect of the interaction. This relationship was a positive one. This result points to an interesting aspect of a patient's communication apprehension behavior, which is that individuals who are forced to communicate will respond with an increase in apprehension. Thus, if physicians are simply

relaying information without the patient's participation, one who experiences a lot of CA may be happier and less anxious with that interaction, as a result, his/her satisfaction will increase.

Another interesting relationship was found between patient satisfaction with warmth and internal locus of control. Although the literature on health locus of control disagreed about how satisfied individuals with an internal locus of control would be in a physician/patient interaction, this investigation found that they could be either satisfied or dissatisfied. The significance of this finding is that it serves as a bridge between the conflicting sets of literature. However, more research should be done to confirm this finding.

### Limitations

Several limitations existed within the construction of this study. First, although many of the subjects reported experiencing CA in a physician-patient interaction, the severity of this anxiety may be dependent upon how often the individual has visited a specific physician. In other words, patients who continuously visit the same doctor may still endure physician-patient interaction related CA in general, but they may no longer experience it with their regular physician. Kenny (1995) found that patients were less satisfied with their physician visit if it was the first time that they had seen that physician. In order to account for this discrepancy, subjects should have been asked to report how many times they had seen the physician in question.

A second limitation of this study may exist in the measurement of patient communication apprehension. The question of whether the communication apprehension that was experienced by the subjects was a result of state or trait anxiety remains unanswered. An individual with high trait anxiety will always experience cross-situational apprehension (Parks, 1980). Thus, his/her scores on the PRCAP may have been skewed. A trait apprehension measure should be added to this study to determine the effect this type of apprehension may have on locus of control and/or satisfaction scores.

A final limitation of this study was using the MHLC scale. During its development it was not entirely reliable if only one form of the scale was used ( $\text{Alpha} = .673-.767$ ). However, if both Form A and B of the scale were used the reliabilities increased ( $\text{Alpha} = .830-.859$ ). Only form B was used during this investigation, and the reliabilities were low ( $\text{Alpha} = .61-.66$ ). In order to increase the reliability of this scale, both forms should be used to measure health locus of control.

### Implications

This research contains two important implications that can be applied to future research on physician-patient communication. First, the relationships found between patient satisfaction and patient communication apprehension must not be ignored. This type of positive relationship has not been documented in previous research. In fact, the opposite has been found (Ayres,

et al., 1996). These relationships may be studied further if future researchers also document how many times a physician has been seen by an individual.

A second implication of this research can be seen in its effects on the health locus of control literature. A lot of disagreement has occurred in the research on health locus of control and how it effects patient satisfaction with the physician-patient interaction (Seeman & Evans, 1962; Cromwell, Butterfield, Brayfield, & Curry, 1977). This study may be the “missing link” that will combine these two contrasting sets of literature.

#### Suggestions for Future Research

There are several questions that have arisen as a result of this investigation. Although a connection between patient satisfaction and communication apprehension in the physician/patient interaction is evident, it is still unclear. This research may be the first one that has discovered a positive relationship between the two. Much more must be done to determine the exact nature of this relationship.

Health locus of control should also be further explored. The inconsistency found in the measurement of its reliability is an issue that should be resolved. There may be an outside variable causing the lower reliabilities. Although this scale already measures internal, powerful others, and chance others locus of control, perhaps internal locus of control should be sub-divided in the same way external locus of control has been.

A final suggestion for future research deals with the effect trait and state communication apprehension may have in the physician-patient interaction. Each of these should also be measured to determine if a pattern exists. It is likely that an individual with high trait apprehension may experience a lot of anxiety despite the number of times that he/she has visited the same physician. However, someone with high state anxiety may only experience apprehension during the first visit or first few visits with a new physician. Once that initial anxiety is alleviated, the interaction may become more satisfactory for that individual. Therefore, it is possible for apprehension and satisfaction to be positively related.

## References

Allen, M., & Bourhis, J. (1996). The relationship of communication apprehension to communication behavior: A meta-analysis. Communication Quarterly, 44, 214-226.

Ayres, J., Colby-Rotell, Noelle, Wadleigh, P. M., & Hopf, T. (1996). Measuring patients' communication apprehension about interacting with physicians: Instrument development. Communication Research Reports, 13 (1), 86-93.

Beatty, M. J. (1987). Communication apprehension as a determinant of avoidance, withdrawal and performance anxiety. Communication Quarterly, 35 (2), 202-217.

Beatty, M. J., Behnke, R. R., & McCallum, K. (1978). Situational determinants of communication apprehension. Communication Monographs, 45, 187-191.

Berger, B. A., & McCroskey, J. C. (1982). Reducing communication apprehension in pharmacy students. American Journal of Pharmaceutical Education, 46 (2), 132-136.

Booth-Butterfield, S., Chory, R., Beynon, W. (1997). Communication apprehension and health communication and behaviors. Communication Quarterly, 45, 235-250.

Burgoon, M., Birk, T., & Hall, J. R. (1991). Compliance and satisfaction with physician-patient communication: An expectancy theory interpretation of gender differences. Human Communication Research, 18 (2), 177-208.

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: Gorsuch Scarisbrick, Publishers.

Cardello, L. L., Berlin Ray, E., & Pettey, G. R. (1995). The relationship of perceived physician communicator style to patient satisfaction. Communication Reports, 8, 27-37.

○ Cegala, D. J., Socha McGee, D., McNeilis, K. S. (1996). Components of patients' and doctors' perceptions of communication competence during a primary care medical interview. Health Communication, 8, 1-27.

Conlee, C. J., Olvera, J., Vagim, N. N. (1993). The relationships among physician nonverbal immediacy and measures of patient satisfaction with physician care. Communication Reports, 6, 25-33.

Cromwell, R. L., Butterfield, E. C., Brayfield, F. M., & Curry, J. J. (1977). Acute myocardial infarction: Reaction and recovery. St. Louis: The C. V. Mosby Company.

Friedman, H. S. (1979). Nonverbal communication between patients and medical practitioners. Journal of Social Issues, 35 (1), 82-97.

Helman, C. G. (1978). "Feed a cold, starve a fever": folk models of infection in an English suburban community, and their relation to medical treatment. Culture, Medicine, and Psychiatry, 2, 107-137.

Henderson, G. (Ed.). (1981). Physician-Patient Communication. Springfield: Charles C. Thomas.

Jackson, L. D. (1992). Information complexity and medical communication: The effects of technical language and amount of information in a medical message. Health Communication, 4 (3), 197-210.

Kelly, L. (1982). A rose by any other name is still a rose: A comparative analysis of reticence, communication apprehension, unwillingness to communicate, and shyness. Human Communication Research, 8 (2), 99-113.

Kennedy, C. J., Probart, C. K., & Dorman, S. M. (1991). The relationship between radon knowledge, concern and behavior, and health values, health locus of control and preventative health behaviors. Health Education Quarterly, 18, 319-329.

Kenny, D. T. (1995). Determinants of patient satisfaction with the medical consultation. Psychology and Health, 10 (5), 427-437.

Korsch, B. M., & Negrete, V. F. (1972). Doctor-patient communication. Scientific American, 227, 66-74.

Kreps, G. L. (1989). Setting the agenda for health communication research and development: Scholarship that can make a difference. Health Communication, 1, 11-15.

Lefcourt, H. M. (Ed.). (1983a). Research with the locus of control construct: Vol. 2. Developments and social problems. New York: Academic Press.

Lefcourt, H. M. (1983b). The locus of control as a moderator variable: Stress. In H. M. Lefcourt (Ed.), Research with the locus of control construct: Vol. 2. Developments and social problems (pp. 253-268). New York: Academic Press.

Levinson, W., Roter, D. L., Mullooly, J. P., Dull, V. T., & Frankel, R. M. (1997). Physician-patient communication: The relationship with malpractice claims among primary care physicians and surgeons. The Journal of the American Medical Association, 277 (7), 553-559.

Ley, P. (1988). Communicating with patients: Improving communication, satisfaction and compliance. London: Croom Helm.

Mason, J. L., Barkley, S. E., Kappelman, M. M., Carter, D. E. , & Beachy, W. V. (1988). Evaluation of a self-instructional method for improving doctor-patient communication. Journal of Medical Education, 63 (8), 629-635.

McCann, S., & Weinman, J. (1996). Encouraging patient participation in general practice consultations. Psychology and Health, 11 (6), 857-869.

McCroskey, J. C. (1997). Willingness to communicate, communication apprehension, and self-perceived communication competence: Conceptualizations and perspectives. In J. A. Daly, J. C. McCroskey, J. Ayres, T. Hopf, & D. M. Ayers (Eds.), Avoiding communication: Shyness, reticence, and communication apprehension (pp. 75-108). New Jersey: Hampton Press, Inc.

McCroskey, J. C. (1992). An introduction to communication in the classroom. Edina: Burgess International Group, Inc. *Δ p. 174.*

McCroskey, J. C., & Richmond, V. P. (1977). Communication apprehension as a predictor of self-disclosure. Communication Quarterly, 25, 40-43.

McCroskey, J. C., & Richmond, V. P. (1982). The quiet ones: communication apprehension and shyness (2<sup>nd</sup> ed.). Dubuque: Gorsuch Scarisbrick, Publishers.

McCroskey, J. C., & Richmond, V. P. (1987). Willingness to communicate. In J. C. McCroskey, & V. P. Richmond (Eds.), Personality and interpersonal communication (pp. 129-156). California: Sage Publications.

McCroskey, J. C., Richmond, V. P., & Davis, L. M. (1986). Apprehension about communicating with supervisors: A test of a theoretical relationship between types of communication apprehension. The Western Journal of Speech Communication, 50, 171-182.

O'Hair, D. H., Behnke, R. R., & King, P. E. (1983). Age-related patient preferences for physician communication styles. Educational Gerontology, 9, 147-158.

Parks, M. R. (1980). A test of the cross-situational consistency of communication apprehension. Communication Monographs, 47, 220-232.

Pendleton, D. (1983). Doctor-patient communication: A review. In D. Pendleton, & J. Hasler (Eds.), Doctor-Patient Communication (pp.5-53). London: Academic Press, Inc.

Pendleton, D. (1985). Towards more effective medical practice. Journal of Applied Communication Research, 13 (2), 96-102.

Pendleton, D., Schofield, T., Tate, P., & Havelock, P. (1984). The consultation: An approach to learning and teaching. Oxford: Oxford University Press.

Pettegrew, L. S., & Logan, R. (1987). The health care context. In C. R. Berger, & S. H. Chaffee (Eds.), Handbook of communication science (pp. 675-710). Newbury Park: Sage Publications.

Richmond, V. P., & Gorham, J. (1992). Communication, learning, and affect in instruction. Edina, MN: Burgess International Group.

Sandler, I., Reese, F., Spencer, L., & Harpin, P. (1983). Person x environment interaction and locus of control: Laboratory, therapy, and classroom studies. In H. M. Lefcourt (Ed.), Research with the locus of control construct: Vol 2. Developments and social problems (pp. 187-251). New York: Academic Press.

Schneider, D. E., & Tucker, R. K. (1992). Measuring communicative satisfaction in doctor-patient relations: The doctor-patient communication inventory. Health Communication, 4, 19-28.

Schumacher, B. K., & Wheelless, L. R. (1997). Relationships of continuing uncertainty and state-receiver apprehension to information-seeking and predictions in dyadic interactions. Communication Quarterly, 45, 427-445.

Seeman, M., & Evans, J. W. (1962). Alienation and learning in a hospital setting. American Sociological Review, 27, 772-783.

Sharf, B. F. (1993). Reading the vital signs: Research in health care communication. Communication Monographs, 60, 35-41.

Skinner, E. A. (1995). Perceived control, motivation, and coping. California: Sage Publications.

Sledge, W. H., Lieberman, P. B., & Whisnant Reiser, L. (1987). Teaching about the doctor-patient relationship in the first postgraduate year. Journal of Medical Education, 62, 187-190.

Smith-Dupre, A. A., & Beck, C. S. (1996). Enabling patients and physicians to pursue multiple goals in health care encounters: A case study. Health Communication, 8, 73-90.

Sorensen, G. A., & Christophel, D. M. (1992). The communication perspective. In V. P. Richmond, & J. C. McCroskey (Eds.), Power in the classroom: Communication, control, and concern (pp. 35-46). New Jersey: Lawrence Erlbaum Associates, Inc.

Tuckett, D., Boulton, M., Olson, C., & Williams, A. (1985). Meetings between experts: An approach to sharing ideas in medical consultations. New York: Tavistock Publications.

University of Nebraska at Omaha. (1997-98). Undergraduate catalog. Omaha: Office of University Relations.

Wallston, K. A., & Wallston, B. S. (1978). Locus of control and health: A review of the literature. Health Education Monographs, 6, 107-117.

Wallston, K. A., & Wallston, B. S. (1978). Development of the multidimensional health locus of control (MHLC) scales. Health Education Monographs, 6, 160-170.

Wallston, K. A., & Wallston, B. S. (1981). Health locus of control scales. In H. M. Lefcourt (Ed.), Research with the locus of control construct: Vol. 1. Assessment methods (pp. 189-243). New York: Academic Press.

Witte, K. (1994). The manipulative nature of health communication research. American Behavioral Scientist, 38 (2), 285-293.

Wyatt, N. (1991). Physician-patient relationships: What do doctors say?  
Health Communication, 3, 157-174.

Zisook, S., & Gammon, E. (1980-81). Medical noncompliance.  
International Journal of Psychiatry in Medicine, 10, 291-303.

**Appendix A**  
**Institutional Review Board Approval**



Institutional Review Board (IRB)  
Office of Regulatory Affairs (ORA)  
University of Nebraska Medical Center  
Eppley Science Hall 3018  
986810 Nebraska Medical Center  
Omaha, NE 68198-6810  
(402) 559-6463  
Fax (402) 559-7845  
E-mail: [irbora@unmc.edu](mailto:irbora@unmc.edu)  
<http://info.unmc.edu/irb/irbhome.htm>

December 9, 1998

Darian Galyon  
Department of Communications  
UNO - 0112

IRB#: 124-98-EX

TITLE OF APPLICATION/PROTOCOL: The Physician/Patient Interaction: Patient's Satisfaction, Communication Apprehension, and Health Locus of Control

Dear Ms. Galyon:

The IRB has reviewed your Exemption Form for the above-titled research project. According to the information provided, this project is exempt under 45 CFR 46:101b, category 2. You are therefore authorized to begin the research.

It is understood this project will be conducted in full accordance with all applicable sections of the IRB Guidelines. It is also understood that the IRB will be immediately notified of any proposed changes that may affect the exempt status of your research project.

Please be advised that the IRB has a maximum protocol approval period of five years from the original date of approval and release. If this study continues beyond the five year approval period, the project must be resubmitted in order to maintain an active approval status.

Sincerely,

A handwritten signature in cursive script, reading 'E. Prentice jlg'.

Ernest D. Prentice, PhD  
Vice Chair, IRB

EDP:jlg

## **Appendix B**

### **Questionnaire Instructions/Demographic Questions**

Dear student:

My name is Darian Galyon. I am a graduate student here at the University of Nebraska at Omaha and I am currently working on my Master's thesis. Your class has been selected to participate in this research project. The purpose of my research is to study physician/patient interactions. This packet contains some brief demographic questions (listed below) and three questionnaires. Participation is voluntary. If you do not feel comfortable answering these questions, please do not feel obligated to continue. If you do not choose to participate, it will not affect your grade. All information that you provide here today is confidential. If you choose to participate, please answer the questions honestly and to the best of your ability.

Thank you for you participation in this research.

Thank you,

Darian Galyon

Directions: These instruments are composed of several questions regarding your satisfaction with your last physician visit. As you are answering these questions please be thinking about your last physician visit.

1. Gender:

\_\_\_\_\_ Male                      \_\_\_\_\_ Female

2. What is your current age? \_\_\_\_\_

3. What is your current class in school?

\_\_\_\_\_ Freshman              \_\_\_\_\_ Sophomore              \_\_\_\_\_ Junior              \_\_\_\_\_ Senior  
0-26 hrs.                      27-57 hrs.                      58-90 hrs.                      91-124 hrs.

4. What is the approximate date of your last physician visit? \_\_\_\_\_

5. I was seeking treatment as a result of (a). . .

\_\_\_\_\_ routine/preventative visit.

\_\_\_\_\_ preexisting, known illness/injury.

\_\_\_\_\_ symptoms, cause unknown

\_\_\_\_\_ other, please specify \_\_\_\_\_

**Appendix C**  
**The Patient Satisfaction Scale**

### PS Questionnaire

For the following questions please indicate in the space provided the degree to which each statement applies to you by marking whether you agree:

(4) VERY MUCH SO. (3) A LOT. (2) VERY LITTLE. (1) NOT AT ALL.

- \_\_\_\_\_ 1. The doctor seemed interested in me.
- \_\_\_\_\_ 2. The doctor was a warm and friendly person.
- \_\_\_\_\_ 3. The doctor understood my problems.
- \_\_\_\_\_ 4. The doctor was someone I could trust.
- \_\_\_\_\_ 5. The doctor treated me with respect.
- \_\_\_\_\_ 6. The doctor understood how I was feeling.
- \_\_\_\_\_ 7. The doctor was happy to explain what I didn't understand.
- \_\_\_\_\_ 8. The doctor took my problems seriously.
- \_\_\_\_\_ 9. The doctor put me at ease.
- \_\_\_\_\_ 10. I had confidence in the doctor's skill.
- \_\_\_\_\_ 11. The doctor was willing to answer my questions.
- \_\_\_\_\_ 12. The doctor explained by condition in language I could understand.
- \_\_\_\_\_ 13. I could tell this doctor about very personal problems.
- \_\_\_\_\_ 14. I felt the doctor disapproved of me.
- \_\_\_\_\_ 15. I know exactly what I have to do with regards to medication or other treatment.
- \_\_\_\_\_ 16. I understand everything the doctor said to me.
- \_\_\_\_\_ 17. I am convinced that the doctor's diagnosis was correct.

## Appendix D

### The Multidimensional Health Locus of Control Scale

### MHLC Questionnaire

For the following questions please indicate in the space provided the degree to which each statement applies to you by marking whether you agree:

(6) STRONGLY AGREE. (5) AGREE. (4) SOMEWHAT AGREE. (3) SOMEWHAT DISAGREE.  
(2) DISAGREE. (1) STRONGLY DISAGREE.

- \_\_\_\_\_ 1. If I become sick, I have the power to make myself well again.
- \_\_\_\_\_ 2. Often I feel that no matter what I do, if I am going to get sick, I will get sick.
- \_\_\_\_\_ 3. If I see an excellent doctor regularly, I am less likely to have health problems.
- \_\_\_\_\_ 4. It seems that my health is greatly influenced by accidental happenings.
- \_\_\_\_\_ 5. I can only maintain my health by consulting health professionals.
- \_\_\_\_\_ 6. I am directly responsible for my health.
- \_\_\_\_\_ 7. Other people play a big part in whether I stay healthy or become sick.
- \_\_\_\_\_ 8. Whatever goes wrong with my health is my own fault.
- \_\_\_\_\_ 9. When I am sick, I just have to let nature run its course.
- \_\_\_\_\_ 10. Health professionals keep me healthy.
- \_\_\_\_\_ 11. When I stay healthy, I'm just plain lucky.
- \_\_\_\_\_ 12. My physical well-being depends on how well I take care of myself.
- \_\_\_\_\_ 13. When I feel ill, I know it is because I have not been taking care of myself properly.
- \_\_\_\_\_ 14. The type of care I receive from other people is what is responsible for how well I recover from an illness.
- \_\_\_\_\_ 15. Even when I take care of myself, it's easy to get sick.
- \_\_\_\_\_ 16. When I become ill, it's a matter of fate.
- \_\_\_\_\_ 17. I can pretty much stay healthy by taking good care of myself.
- \_\_\_\_\_ 18. Following doctor's orders to the letter is the best way for me to stay healthy.

## **Appendix E**

### **The Personal Report of Communication Apprehension with Physicians Scale**

### **PRCAP Questionnaire**

For the following questions please indicate in the space provided the degree to which each statement applies to you by marking whether you agree:

(1) STRONGLY AGREE. (2) AGREE. (3) ARE UNDECIDED. (4) DISAGREE.  
(5) STRONGLY DISAGREE.

- \_\_\_\_\_ 1. While participating in a conversation with a new physician I am not nervous.
- \_\_\_\_\_ 2. Ordinarily, I am very tense and nervous when communicating with my physician.
- \_\_\_\_\_ 3. I have no fear of speaking up in conversations with my physician.
- \_\_\_\_\_ 4. I am not afraid to speak up in medical interviews with my physician.
- \_\_\_\_\_ 5. Ordinarily, I am very calm and relaxed when talking to my physician.