

**WHAT'S UP, DOC?:  
AN EXAMINATION OF ENTERTAINMENT TELEVISION'S PORTRAYAL  
OF MEDICAL PROFESSIONALS, PATIENTS,  
AND THEIR INTERACTIONS**

by

Jennifer Tyrawski

A thesis submitted to the Faculty of the University of Delaware in partial fulfillment of the requirements for the degree of Master of Arts in Communication

2010

Copyright 2010 Jennifer Tyrawski  
All Rights Reserved

**WHAT'S UP, DOC?:**  
**AN EXAMINATION OF ENTERTAINMENT TELEVISION'S PORTRAYAL**  
**OF MEDICAL PROFESSIONALS, PATIENTS,**  
**AND THEIR INTERACTIONS**

by  
Jennifer Tyrawski

Approved: \_\_\_\_\_  
Nancy Signorielli, Ph.D.  
Professor in charge of thesis on behalf of the Advisory Committee

Approved: \_\_\_\_\_  
Elizabeth M. Perse, Ph.D.  
Chair of the Department of Communication

Approved: \_\_\_\_\_  
George H. Watson, Ph.D.  
Dean of the College of Arts & Sciences

Approved: \_\_\_\_\_  
Debra Hess Norris, M.S.  
Vice Provost for Graduate and Professional Education

## ACKNOWLEDGMENTS

“But in the end, the most important thing to accept is that no matter how alone you feel, how painful it may be, with the help of those around you, you’ll get through this too.” – Dr. John Dorian, from the television show *Scrubs*

I would like to thank the many of those around me who helped me during this experience. To Dr. Nancy Signorielli, my advisor, this thesis would not have been possible without you. You put countless hours into this project, from honing my ideas into a feasible study, figuring out a way to run the analyses, and editing my words numerous times. Without your guidance, I would still have 80 hypotheses and no idea how to create a recording instrument. Additionally, you cared about me as a person and showed me so much kindness throughout my time here. You not only helped me “get through this” but also made this experience fulfilling and enjoyable. Thank you for everything.

To my committee members, Dr. Betsy Perse and Dr. Jenny Lambe, thank you for all of the time and effort you spent on this project. Your interest in my study and your suggestions helped shape the final product into something I am proud of and love. I’d also like to thank the rest of the Communication department faculty and staff for the knowledge and support they have given me over the past six years. Special thanks go out to Dr. Lindsay Hoffman, for suggesting that grad school might be the place for me, and Luci Coumatos, for being my “B.F.F.” and always chatting with me when I needed a break.

To the other graduate students, thanks for listening to my ideas and “rants” (S. Clarke, that’s for you) and for the advice, support, and laughs you all provided. I’d especially like to thank my name twin, Jen Owlett, for deciding to come to Delaware. During these past two years, you have become one of my best friends, and I do not know how I would have survived this experience without you. Thank you for always supporting me and making grad school fun. (I’d also like to thank Dr. Charlie Pavitt for always reminding Jen and me to take breaks for “huge fun” and for all of the advice and kindness).

To my sister Kate, thanks for all of your help. From coding to running errands for me when I was too busy to leave my computer, I couldn’t have completed this project without you. You’re a good kid, and I love you.

And finally, to my parents, thank you for everything. Without your support, none of this would be possible. You have done more for me than I could ever express in these acknowledgments. I love you both.

## TABLE OF CONTENTS

LIST OF TABLES.....	viii
ABSTRACT.....	xi
Chapter	
1 INTRODUCTION.....	1
1.2 Cultivation Theory.....	4
1.2.1 Cultivation Theory’s Major Concepts.....	4
1.2.2 Resonance and Mainstreaming.....	6
1.2.3 Psychological Processes in Cultivation.....	7
1.3 Social Cognitive Theory.....	8
1.3.1 Social Cognitive Theory’s Major Concepts.....	9
1.3.2 Symbolic Modeling.....	9
1.4 Medical Images on Television.....	10
1.4.1 Physicians on Early Television.....	13
1.4.2 Evolution of the Television Physician.....	14
1.4.3 Nurses on Television.....	17
1.4.4 Patients on Television.....	18
1.4.5 Hospital Administrators, Patients’ Relatives and Friends.....	19
1.4.6 Medical Staff- Patient Interactions.....	20
1.4.7 Illness and Disease on Television.....	23
1.4.8 Mental Illness on Television.....	23
1.4.9 Health Care Locations.....	25
1.4.10 Gender of Characters.....	25
1.5 Research Questions and Hypotheses.....	26
1.5.1 Major and Minor Characters.....	27
1.5.2 Character Traits.....	27
1.5.3 Patients.....	29
1.5.4 Interactions with Patients.....	30

	1.5.5 Attitudes about Patients.....	32
2	METHODS.....	33
	2.1 Sample.....	33
	2.2 Units of Analysis and the Coding Procedure.....	35
	2.2.1 The Program.....	35
	2.2.1.1 The Program Recording Instrument.....	36
	2.2.2 The Characters.....	37
	2.2.2.1 The Character Recording Instrument.....	37
	2.3 Coder Training.....	41
	2.4 Reliability Analysis.....	42
	2.5 Data Analysis Techniques.....	44
3	RESULTS.....	45
	3.1 Description of the Sample- Program.....	45
	3.2 Description of the Sample- Characters.....	47
	3.3 Hypotheses and Research Questions.....	53
	3.3.1 Character Status, Character Type, and Overall Behavior.....	53
	3.3.2 Destructive and “Bad” Behaviors.....	57
	3.3.3 Medical Professionals’ Modes and Attitudes.....	58
	3.3.4 Patients: Demographics, Illnesses, Treatment, and Outcomes.....	60
	3.3.5 Patient Participation.....	67
	3.3.6 Interactions: Frequency.....	69
	3.3.7 Interactions: Topics.....	71
	3.3.8 Interactions: Communication Style.....	73
	3.3.9 Nurses.....	76
4	SUMMARY AND DISCUSSION.....	82
	4.1 Summary.....	82
	4.2 Findings and Implications.....	83
	4.2.1 Description of the Characters.....	83
	4.2.2 Character Status.....	83
	4.2.3 “Good” vs. “Bad”.....	84

4.2.4	Medical Professionals' Attitudes and Actions Toward Patients .....	89
4.2.5	Patients .....	91
4.2.6	Communicative Behaviors .....	94
4.3	Limitations .....	98
4.4	Future Directions .....	100
4.5	Conclusion .....	102

Appendix

A	RECORDING INSTRUMENT-PROGRAM .....	105
B	RECORDING INSTRUMENT-CHARACTERS .....	108
	REFERENCES .....	118

## LIST OF TABLES

Table 2.1	Program reliability: Krippendorff’s Alpha for program variable .....	42
Table 2.2	Character Reliability: Krippendorff’s Alpha for character for variables.....	43
Table 3.1	Frequency of Programs.....	46
Table 3.2	Episodes by Network.....	46
Table 3.3	Frequency of Gender .....	47
Table 3.4	Frequency of Race .....	48
Table 3.5	Frequency of Ethnic Background .....	48
Table 3.6	Frequency of Age.....	48
Table 3.7	Frequency of Sexual Orientation.....	49
Table 3.8	Frequency of Social Class .....	49
Table 3.9	Frequency of Medical Roles.....	50
Table 3.10	Doctors’ Race by Gender.....	51
Table 3.11	Doctors’ Ethnicity by Gender .....	51
Table 3.12	Doctors’ Sexual Orientation by Gender .....	51
Table 3.13	Nurses’ Race by Gender .....	52
Table 3.14	Nurses’ Ethnicity by Gender.....	53
Table 3.15	Nurses’ Sexual Orientation by Gender .....	53
Table 3.16	Medical Role by Character Status .....	54
Table 3.17	Medical Role by Character Type.....	56

Table 3.18	Medical Role by Overall Behavior .....	56
Table 3.19	Frequency of Destructive/ “Bad” Characters.....	57
Table 3.20	Frequency of Doctors’ Modes .....	59
Table 3.21	Comparisons of Frequencies of Doctors’ Modes .....	60
Table 3.22	Patient’s Race by Gender.....	61
Table 3.23	Patients’ Sexual Orientation by Gender .....	62
Table 3.24	Patients’ Age by Gender .....	62
Table 3.25	Chi-Square Goodness of Fit- Illnesses .....	63
Table 3.26	List of Other Medical Conditions .....	64
Table 3.27	Chi-Square Goodness of Fit Test- Responsibility for Illness .....	65
Table 3.28	Frequency of Treatment Locations .....	66
Table 3.29	Comparisons of Frequencies of Treatment Locations .....	66
Table 3.30	Chi-Square Goodness of Fit Test- Outcome of Treatment.....	67
Table 3.31	Frequency of Patient Participation with Doctors.....	68
Table 3.32	Comparison of Patient Participation Levels with Doctors .....	68
Table 3.33	Frequency of Doctors’ Interactions with Different Characters.....	69
Table 3.34	Comparison of Frequencies of Doctors’ Interactions with Different Characters .....	70
Table 3.35	Frequency of Interaction Topics .....	71
Table 3.36	Comparison of Frequencies of Interaction Topics.....	72
Table 3.37	Frequency of Doctors’ Communication Style .....	73
Table 3.38	Comparisons of Frequencies of Doctors’ Communication Style .....	73
Table 3.39	Frequency of Interaction Topics’ Communication Style.....	74

Table 3.40	Comparisons of Interaction Topics' Communication Styles.....	75
Table 3.41	Frequency of Nurses' Modes.....	77
Table 3.42	Comparisons of the Frequencies of Nurses' Modes.....	77
Table 3.43	Frequency of Patient Participation Levels with Nurses.....	78
Table 3.44	Comparisons of Frequencies of Patient Participation Levels with Nurses.....	79
Table 3.45	Frequency of Nurses' Interactions with Different Types of Characters.....	79
Table 3.46	Comparisons of Frequencies of Nurses' Interactions with Different Types of Characters.....	80
Table 3.47	Frequency of Nurses' Communication Styles.....	81
Table 3.48	Comparisons of the Frequencies of Nurses' Communication Styles.....	81

## **ABSTRACT**

The purpose of this study was to investigate entertainment television's portrayal of the medical world. More specifically, this study examined the characterization of medical professionals and patients on television as well as their communicative behaviors. According to cultivation and social cognitive theory, television acts as a socializing agent and can impact viewers' perceptions of the world and their subsequent behaviors. Previous research has focused on examining how medical professionals, mainly doctors, are portrayed. This study examined medical professionals but also expanded the scope of the examination to include patients and health care interactions. As most viewers will assume the role of patient in real medical situations and research has demonstrated that communication plays a strong role in the success of health care, this expansion is important.

A total of two hundred and thirty eight characters from both broadcast network and cable programming were analyzed. Results indicated that doctors and nurses are shown as more important and more positive than other health care workers and patients on television. Results also indicated that most patients are "bad" people suffering from traumatic injuries or rare illnesses, but they normally survive these ailments. Analyses regarding communication found that doctors typically dominate health care interactions and patients are uninvolved in health care decisions. In terms of cultivation and social cognitive theory, viewers might develop some detrimental conceptions about the medical world and their role in health care from television.

## Chapter 1

### INTRODUCTION

Medical shows have been a staple on television since its inception. As Turow (1989) explains, doctors first appeared on television in 1952. Due to widely successful series such as *Dr. Kildare*, *Marcus Welby, M. D.*, *M\*A\*S\*H*, and *St. Elsewhere* as well as other less popular series, since 1958 there has always been a doctor on prime time network television. This trend does not appear to be stopping; the popularity and number of medical shows continue to grow. Two of the most popular shows on television, FOX's *House* and ABC's *Grey's Anatomy*, revolve around a team of doctors, and both were ranked in the top 20 programs for 2008-2009 season ("Season Program," 2009). FOX even considers *House* one of its cornerstone programs (Werts, 2009).

Successful medical shows are not just found on broadcast television; cable television also has a number of medical shows. During the 2009 summer season, for example, cable television debuted three successful medical series: USA's *Royal Pains*, TNT's *HawthoRNe*, and Showtime's *Nurse Jackie*. An episode of *Royal Pains* was the fourth most watched show on cable for the week of August 3rd, 2009 (Seidman, 2009), and both *HawthoRNe* and *Nurse Jackie* were renewed for a second season (Seidman, 2009a; 2009b). TVGuide.com ("Fall TV," n.d.) notes that, on the four major broadcast networks, seven prime time television programs planned for the fall 2009 season revolve around the lives of medical professionals, and this figure does not include the number of programs dealing with forensic science and criminal medical

examiners. With all of these medical shows and the health-related scenes and characters on shows not typically dealing with medicine, television delivered a heaping dose of medicine to viewers in 2009.

Despite being a popular topic for ratings, the media's depiction of medicine has generated some concern for both researchers and industry professionals. Traditionally, health professionals and researchers have examined the presentation of medical information in the news and its impact on the public (e.g., Clark, 1992; Katz, 2008; Nelkin, 1996; Riffe, 2006); however, focus has shifted toward examining medical depictions in entertainment programming. For example, some researchers have explored health-related content and behaviors shown on television (e.g., Byrd-Bredbenner, Finckenor, & Grasso, 2003; Murphy, Hether, & Rideout, 2008; Signorielli, 1993). The depiction of doctors has also received some attention from researchers (e.g., Chory-Assad & Tamborini, 2001; Gerbner, Morgan, & Signorielli, 1982), as has the effects of these depictions on viewers' perceptions of doctors (e.g., Chory-Assad & Tamborini, 2003; Gerbner, et al., 1982). Health professionals have also been concerned with their television counterparts; many medical associations had script approval over the earliest doctor shows (Turow, 1989), and many current shows utilize medical advisors in an attempt to be as accurate as possible (Shockey, 2009).

Despite the use of medical advisors, inaccurate depictions of doctors or medical procedures do occur, and one of researchers' biggest concerns is how these depictions can affect viewers. For example, one study examined cardiopulmonary resuscitation on the television shows *ER*, *Chicago Hope*, and *Rescue 911* and found that these shows inaccurately depicted the survival rate of CPR and most often ignored the health problems CPR survivors encounter after resuscitation ("TV's Misleading

Miracles,” 1996). Researchers are worried these inaccuracies will lead viewers to overestimate their chances for survival after CPR and base their actions on these incorrect perceptions. However, Michelle Goodman (2008), a columnist for ABCNews.com, takes a different stance on television’s inaccurate portrayals. Although Goodman agrees that television depicts most occupations inaccurately, she argues these depictions are dramatic and interesting for the viewer. As television is a diversion, these inaccuracies are serving their purpose. Goodman concludes, “if I wanted a lesson in brain surgery or forensic science, I’d pick up a textbook-- not the remote.”

Although Goodman’s conclusion echoes popular sentiment about television, it ignores the fact that we learn from television, even if that learning is unintentional. Cultivation and social cognitive theorists suggest television influences viewers’ perceptions of the world and subsequent behaviors (Gerbner, Gross, Morgan, Signorielli, & Shanahan, 2002; Bandura, 2002). Research supports these claims; researchers, for example, have found that viewers learn health information from entertainment programming (e.g., Valente, et al., 2007; Wilkin, et al., 2007) and that programming can also influence subsequent health-related actions (e.g., Katz, 2006). It is not just regular viewers who are impacted by medical shows; even future doctors are affected by this programming. Brownstein (2009) reports that many medical students pick up habits from television doctors and admit learning from medical dramas.

What unintentional health lessons could viewers learn from television? This study attempts to begin to answer this question through an examination of television content. In previous studies, researchers have primarily concentrated on

examining the health topics shown on television and how medical professionals, mainly doctors and nurses, are portrayed. This study examines these same topics as well as expands the scope of the examination to include other medical personnel and patients, as there has been considerably less attention on these depictions. This expansion is important; many different people can be involved in medical situations. As most viewers assume the role of patient in medical situations, it is important to examine how television represents this role. If television can influence how people view health care and their actions regarding their health, television can have some very important consequences for viewers. Thus, the purpose of this study was to examine how television portrays the medical world. As background, literature on cultivation, social cognitive theory, and relevant research findings are reviewed.

## **1.2 Cultivation Theory**

According to cultivation theorists, television is a “storyteller” (Morgan & Signorielli, 1990, p. 13); television is the main proprietor of cultural stories and messages. Although many communication theories and studies focus on the short-term behavioral effects of exposure to media content (Perse, 2001), cultivation theory proposes a much more pervasive “effect”: enculturation (Gerbner et al., 2002). The main idea of cultivation theory is that television cultivates shared conceptions of reality among different social groups (Gerbner et al., 2002).

### **1.2.1 Cultivation Theory’s Major Concepts**

One of the basic assumptions of cultivation theory is that television is different from other media. One difference is that the average person has traditionally spent more time watching television than using other media. According to Morgan

and Signorielli (1990), watching television is one of our most time-consuming activities. Even with the increased popularity of the Internet, a recent study found that television is still the most dominant medium in society, with people averaging around five and a half hours of television use per day (“Video Consumer Mapping Study,” 2009). The study also noted that television was more likely than other media to be used alone, without the distraction of another medium. Television is also unlike print media in that the television audience does not need to be literate (Gerbner et al., 2002). Consequently, people start watching television in infancy and continue using it into old age. Moreover, television is available constantly and one does not have to leave home to watch it (Morgan & Signorielli, 1990). All ages and social classes in society watch television. Television is a visual medium with a unique ability to tell cultural stories.

Because of the pervasiveness of television throughout our lives, cultivation researchers examine the long-term cumulative effects of television viewing. These effects are not dramatic shifts in beliefs or behaviors but rather “continuity, stabilization, and gradual shifts” (Morgan & Signorielli, 1990, p. 18) in perspectives of the world; in short, cultivation is not categorized as a simple, stimulus-response effect. As Morgan and Signorielli (1990) explain, “the cultivation process is not thought of as a unidirectional flow of influence from television to audiences, but rather part of a continual, dynamic, ongoing process of interaction among messages and contexts” (p. 19). While factors such as reference groups and personal experiences play a role in constructing views of social reality, television’s messages also influence this view (McQuail, 2005).

### **1.2.2 Resonance and Mainstreaming**

Two of the main processes of cultivation theory are resonance and mainstreaming. Resonance refers to an amplification of cultivation for a certain group, because television's depictions about a topic are congruent with that group's everyday realities (Shanahan & Morgan, 1999). According to Shanahan and Morgan (1999), resonance arose from criticism of some empirical findings. Some researchers found that a fear of crime was only cultivated in high crime, urban neighborhoods and concluded that television viewing had nothing to do with the relationship. Cultivation scholars, however, came to a different conclusion. As Shanahan and Morgan (1999) explain:

“In contrast to the way these findings are usually presented, these data do not show a spurious association... Instead, they show a theoretically vital specification- although the relationship disappears or is even reversed in the low crime areas, it persists or is even boosted in the high crime areas” (p. 63).

For those heavy viewers in high crime areas, television's message about violence resonated with their real world circumstances.

Similarly, the concept of mainstreaming arose from criticism. As Morgan and Signorielli (1990) explain, cultivation researchers were criticized for the type of controls they implemented in data analysis. Originally, statistical controls were used within subgroups, examining the effects of television viewing on attitudes within these groups. Other scholars, however, analyzed similar data sets using simultaneous multiple controls and discovered the overall relationship across groups seemed to disappear. These scholars charged that because of this finding, all cultivation relationships were spurious (Shanahan & Morgan, 1999). However, as with resonance, cultivation researchers came to a different conclusion. According to

Morgan and Signorielli (1990), the absence of an overall relationship does not mean that there are no meaningful relationships within groups. Rather, there may be group specific differences, one of which is seen in “mainstreaming” (p. 25). According to Hawkins and Pingree (1990), mainstreaming refers to “a situation in which light viewers from two or more subgroups (e.g., high school vs. college educated) hold different social reality beliefs while the heavy viewers in the subgroups hold more similar beliefs” (p. 38). Despite some believing mainstreaming was a post hoc explanation (see Shanahan & Morgan, 1999 for a review), it is a theoretical enhancement of the theory of cultivation and in more recent studies its existence is often hypothesized. As Shanahan and Morgan (1999) explain:

“As a process, mainstreaming represents the theoretical elaboration and empirical verification of the argument that television will cultivate common perspectives. It represents a relative homogenization, an absorption of divergent views, and a apparent convergence of disparate outlooks upon the overarching patterns of the television world” (p. 73).

### **1.2.3 Psychological Processes in Cultivation**

Another criticism of the cultivation perspective is there is no explanation of the underlying psychological processes that lead to cultivation, and because of this, the relationship between television viewing and attitudes can only be considered a correlation (Hawkins & Pingree, 1990). This criticism has driven researchers to attempt to uncover this process. As Gerbner et al. (2002) explain, there was considerable progress on this topic during the 1990s. One of the first models proposed that cultivation occurred as a two-step learning process. This model did not receive much empirical support; although Perse (1990) did find that watching television news

for entertainment purposes was positively associated with perceptions of less personal safety and thus supportive of an incidental learning process. Another researcher proposed that source confusion lead to cultivation of social reality perceptions (Mares, 1996). According to Mares (1996), people confuse the source of their information when making reality judgments and forget that the information came from fictional programming. Schrum (1997), on the other hand, argued that people do not normally consider the sources of their information during judgments. Schrum (1997; 2002) proposed that the cultivation effect occurs much like a priming effect because television images are easily accessible in the minds of heavy viewers. Ideas or images seen on television thus are more salient for heavy viewers, and a cognitive shortcut is created. In addition to being indicative of incidental learning, Perse's (1990) findings were also indicative of a cognitive priming process. Although it is the most plausible explanation of underlying processes leading to cultivation (Gerbner et al., 2002), more investigation of this process is necessary.

### **1.3 Social Cognitive Theory**

This research study is also related to Bandura's social cognitive theory. Both theories propose that the media produce images of reality and these images can influence how viewers perceive the world. However, in contrast to cultivation, social cognitive theory is concerned not only with the conceptions of reality people develop from the media, but also how people behave based on these conceptions because the theory posits that people act based on their knowledge. As Bandura (2002) explains, "to a large extent, people act on their images of reality. The more people's images of reality depend on the media's symbolic environment, the greater its social impact" (Bandura, 2002, p. 126).

### **1.3.1 Social Cognitive Theory's Major Concepts**

According to Bandura (2002), people have a set of cognitive capabilities that guide their actions. These capabilities include a symbolizing capability, a self-regulatory capability, a self-reflective capability, and a vicarious capability. The symbolizing capability allows humans to create cognitive models based on their experiences. Humans use these models to guide future behavior. Because of their self-regulatory capability, humans can self-direct their actions. People can predict possible consequences of their actions from their relevant cognitive models, and can set goals and plan actions. The self-reflective capability refers to humans' ability to evaluate their judgments and thinking. People have an idea of what "normal" thoughts and behaviors are considered and can compare their own to these standards. Lastly, humans' vicarious capability is the most relevant to media studies. According to Bandura (2002), cultures could not function if humans solely learned through direct experience; the process would be too tedious and time-consuming. Instead, humans can learn by vicariously observing others' actions and their consequences. People can learn from more than just observations of other humans and their actions; people can also observe and learn through media representations. As McQuail (2005) summarizes, "the basic idea is that we cannot learn all or even much of what we need to guide our own development and behavior from direct personal observation and experience alone. We have to learn much from indirect sources, including the mass media" (p. 493).

### **1.3.2 Symbolic Modeling**

According to Bandura (2002), observational learning from the media occurs through symbolic modeling. People learn behaviors from models of actions

shown in the media. This process occurs through four subfunctions: attention, retention, production, and motivation (Bandura, 2002). Attention refers to the selective nature of human observation; a person has to become aware of the modeled behavior in order to learn it. In addition to attention, retention is also a necessary part of modeling; in order to be influenced by observations, people have to remember them. According to Bandura (2002), humans extract information from a model and restructure it “into rules and conceptions for memory representation” (p. 127). Following retention, the third subfunction of observational learning is the production of the behavior. Production occurs when “symbolic conceptions are translated into appropriate courses of action” (p. 129). People do not produce actions once they learn them, however; the final sub-function of motivation is necessary to perform an action. As Bandura (2002) explains, “social cognitive theory distinguishes between acquisition and performance because people do not perform everything they learn” (p. 129). People become motivated to perform an action from the anticipatory rewards or punishments associated with the behavior. According to Bandura (2002), there are three types of incentives: direct, vicarious, and self-produced. People are more motivated to perform an action if they have experienced direct rewards from doing it, seen others benefit from performing the action, or if they find the action self-satisfying.

#### **1.4 Medical Images on Television**

If television cultivates certain conceptions of reality and people act based on these conceptions, it is important to examine television’s messages. Medical images on television are especially important to analyze because the wide array of possible effects from these depictions could have serious consequences. For example,

people might not perceive certain conditions as important or threatening if they are not commonly shown on television. According to the Center for Disease Control, heart disease is the number one killer of both men and women in the United States (“Heart disease,” n.d.). If it is not portrayed on television, however, viewers might not understand their risk for developing heart disease and could ignore symptoms or not implement preventive behaviors.

How medical professionals are portrayed on television could also be harmful to viewers. For example, Chory-Assad and Tamborini (2001) examined how both fictional and non-fictional television programming portrays television doctors. They found, in a February 1999 sample of the four broadcast networks’ programming, that fictional portrayals show doctors in a mostly positive light, but these portrayals are much more negative than those seen in previous decades as well as those depictions on non-fictional programming. Following their content analysis, Chory-Assad and Tamborini (2003) conducted a cultivation analysis using a sample of 290 undergraduates, primarily young (mean age of 19.8 years) and female (55%), during the spring of 1999. They found that increased exposure to prime time doctor programs was positively associated with the perceptions of doctors as uncaring, cold, unfriendly, nervous, tense, and anxious. If doctors are shown in a negative light, viewers might not want to go for treatment or if they do, they might choose to ignore their doctor’s advice. On the other hand, if doctors are portrayed as miracle workers, unattainable standards for real physicians may be created. Similarly, if nurses are portrayed negatively, patients might ignore their medical advice or refuse to be treated by them. This is especially important at this time in the United States, as there is a shortage of primary care doctors and nurse practitioners are filling the gap (Brewington, 2009).

Viewers could also learn about how to be a patient from television. It is possible that patients on television are not involved in decisions about their medical care or they do not ask their doctors or nurses questions. If this is the case, viewers might model this behavior. On television, patients might only go to the emergency room for treatment, and this could cause viewers to perceive the hospital as their only option. This is problematic for the country, as using the emergency room for primary care wastes an estimated \$14 billion dollars annually (Kalivanz, 2009). Of course, all these effects are speculative; until the content is analyzed, we cannot even be sure of what viewers are seeing. But the fact that these effects are possible underscores the importance of this research area and this study in particular.

Previous research has shown that health topics are common on television. Murphy et al. (2008) analyzed the top ten prime time scripted shows among 18-49 year-olds during the 2004, 2005, and 2006 spring television seasons and found that there were on average one and a half health-related storylines per episode. Health-related storylines included any content that referenced “disease, injury, or disability” (p. 15). Byrd-Bredbenner et al. (2003) examined a composite week of prime time network programs popular with children aged 2 to 11 years old in October 1998 for health-related content. They found that 24 percent of the programs contained health-related content. Health-related behaviors are commonly shown on television; according to Kline (2003), research shows that television and movie characters have consistently modeled unhealthy behaviors. For example, research has shown that popular television characters tend to overeat, especially unhealthy foods; yet, almost none of these characters are overweight or obese (Gerbner, et al., 1982; Kline, 2003). Murphy et al. (2008) found that in addition to not being obese, television characters

also do not exercise. Byrd-Bredbenner et al. (2003) had similar results; in their sample, food was encountered 15 times per hour and alcohol 4 times per hour. Even though many television characters are often shown engaging in unhealthy behaviors, they are healthy overall (Gerbner et al., 1982). Despite the fact that most television characters are healthy, there are those who are sick and need the attention of medical personnel. The following sections detail how these characters are portrayed, how they interact, the types of illnesses they encounter, and where treatment occurs.

#### **1.4.1 Physicians on Early Television**

According to Gerbner et al. (1982), doctors have been continually overrepresented on television. Before 1980, the portion of doctors and nurses on television was five times greater than the proportion of medical professionals in the real world. Viewers would normally see 12 doctors on prime time each week, and 3 of those doctors were major characters.

In addition to outnumbering their real-world counterparts, television doctors also created very high standards for real physicians. Since the earliest medical dramas, doctors have been portrayed as good, successful, fair, sociable, and warm (Gerbner et al., 1982; Turow & Gans-Boriskin, 2007), and Gerbner et al. (1982) found that heavy viewing of television was associated with high confidence in doctors. Early television physicians were also portrayed more favorably than other professionals on television; “fewer than 4 percent of television doctors (major characters) are evil, which is half the number found in other professions” (Gerbner et al., 1982, p. 294). According to Malmshemer (1988), television doctors routinely achieved the impossible, and Vandekieft (2004) notes that doctors had “astounding success rates” (p. 220). Television doctors viewed medicine as their “calling” (p. 218), and doctors

did not have personal concerns or problems. Instead, doctors were extremely attentive to their patients and solved all of their patients' problems, even if the problems were not of a medical nature. Malmshemer (1988) summarizes:

“Patients live more often than not (they die only from incurable diseases); doctors rarely if ever fail, and if they begin to err, they are presented as atypical and quickly brought back into the fold by their more level-headed and representative colleagues; the medical system seldom falters in its task of bringing the best possible care to all people. In short, the world of the television doctor is a medical utopia unmatched in previous idealization or in real life” (p. 131).

#### **1.4.2 Evolution of the Television Physician**

Despite their positive beginnings, medical shows and their doctors evolved. One of the first changes in the dramatic formula of medical shows was to focus on the doctors' problems. According to Turow (1989), there was “the tendency through the 1970s to shift from an anthology-style focus on problems of the patients to a greater concern with the personal and professional difficulties of the medical people themselves” (p. 270). *M\*A\*S\*H* is the best example of this shift. In the popular series, the doctors became the centerpiece of the show (Vandekieft, 2004). Instead of focusing on patient issues, patients were part of the background or used as “a catalyst for doctor-centered plots developments” (p. 225). The doctors of *M\*A\*S\*H* were also shown as human; they had personality flaws. Despite their personal flaws, they were still good doctors who showed unlimited dedication to their patients.

After *M\*A\*S\*H*, television doctors began to show flaws in their work. The astounding success rates from earlier programs disappeared, and doctors became

fallible. One popular program of the 1980s, *St. Elsewhere*, had a “lack of miracles” (Vandekieft, 2004, p. 226) and presented a cynical and sensationalized picture of doctors and medicine. Doctors continued to be portrayed as fallible and human into the 1990s. Vandekieft (2004) notes that *ER* and *Chicago Hope* followed “a heroic archetype to a limited extent” (p. 230), but the doctors still had flaws.

Other researchers have come to the same conclusions. In their content analysis of the entire 1996-1997 seasons of *ER* and *Chicago Hope*, Makoul and Peer (2004) found that the doctors were by far the major characters of these television programs, with doctors appearing in over 86.6 percent of scenes on *ER* and 97.5 percent of the scenes in *Chicago Hope*. These doctors were mostly commonly seen as sensitive/ethical, vulnerable/struggling, insensitive/indifferent, and competent/expert and most often dealing with their own personal problems (p. 252-253). Makoul and Peer (2004) conclude that *ER* and *Chicago Hope* framed physicians as human. In these shows, “the personal life of the doctor is paramount” and doctors were “multifaceted, vulnerable, and fallible” characters (p. 257).

Jacobs (2003) also examined the 1990s hospital dramas *ER* and *Chicago Hope* as well as British shows such as *Cardiac Arrest* and *Casualty*. Jacobs’ conclusions echo the findings of Makoul and Peer (2004) and Vandekieft (2004); doctors are human and can make serious mistakes. As Jacobs (2003) notes, “the doctors and hospitals themselves may cause more harm than whatever it is the patients came in for in the first place” (p. 120). Despite their mistakes, the doctors are not murderous or evil; “such figures are totally absent from the new hospital dramas but instead there is a large number who we do see as culpable for the deaths of their patients through mistakes or negligence or simply circumstance” (p. 125).

Chory-Assad and Tamborini's (2001) examination of a February 1999 sample of broadcast network programming found that fictional programs still show doctors in a mostly positive light, but these portrayals are much more negative than in previous decades and compared to the depictions on non-fictional programming. They also found that not all doctors make mistakes on television; "contemporary fictional programming tends to show expert physicians, as well as those that are unskilled, make mistakes, or are unsure of their abilities" (Chory-Assad & Tamborini, 2001, p. 516).

Turow and Gans-Boriskin (2007) also note that television's depiction of doctors has become more negative in recent years. Morgan, Harrison, Chewing, Davis, & DiCorcia, (2007) examined entertainment depictions of organ donation during January 2004 through December 2005 on the four major broadcast networks and found that many doctors are portrayed as "vultures" hoping their patients would die so they could harvest their organs. Koch (2008) describes the popular doctor from FOX's *House* as "...the Vicodin-popping House insults his colleagues, demeans the medical fellows who work for him, disregards hospital policy, ignores patient wishes and dismiss as irrelevant both basic rules of medical ethics and the law" (p. 67). It seems today's Dr. House is a far cry from yesterday's caring and attentive Dr. Welby.

Despite the finding that doctors have recently been portrayed in a more negative light than previous decades, they still are shown as performing courageous acts. Quick (2009) notes that in *Grey's Anatomy* the doctors constantly commit valiant acts and in a 2006 study of undergraduate *Grey's Anatomy* viewers and nonviewers, Quick found that those who perceived the show as credible had higher perceptions of doctors' courageousness.

### 1.4.3 Nurses on Television

Nurses on television have received far less attention from researchers than doctors. This could be due to the fact that nurses have largely been invisible in all types of media (Meier, 1998). In fictional programming, nurses are often minor characters without well-defined roles (Turow, 1989; Gordon & Buresh, 2001). Gerbner et al. (1982) found that viewers would see around six nurses on prime time each week, but only one nurse was a major character. As Signorielli (1993) summarizes, “nurses, as most female characters on television, are secondary characters whose roles are not terribly important to the overall plot line” (p. 43).

Television nurses, whether major or minor characters, have not been portrayed very favorably. Gerbner et al. (1982) found that doctors were shown as “smarter and more rational, stable, and fair than nurses” (p. 294). Nurses are subordinates to doctors and “function in servitude or in thrall to the physician’s knowledge and judgment” (Gordon & Buresh, 2001, p. 34). When nurses did have more of a plot role, they were normally portrayed as sex objects for the doctors (Turow, 1989). Gordon and Buresh (2001) caution that “because nurses are so often cast as adjuncts, the viewer does not understand that nursing is a distinct discipline based on its own science and research” (p. 34).

Despite their earlier absence, nurses might develop more of a role on medical shows this year. According to TVGuide.com writer Tim Molloy (2009), three shows in 2009 are focused on nurses. Two of these shows, *HawthoRNe* and *Nurse Jackie*, debuted in the summer and have already been renewed for a second season. *Mercy* is a new drama that premiered on NBC this fall. It remains to be seen if or how these new shows will change the overall picture of nurses on television.

#### 1.4.4 Patients on Television

As with nurses, researchers have not paid a great deal of attention to patients on television. This might be due to the fact that patients currently only fill minor roles on medical shows. Before the 1970s, patients played a large role on doctor shows; each episode would focus on a patient's problem that the doctor would fix (Turow, 1989). Once these shows started to focus on the doctors' personal problems and struggles, patients were relegated to minor roles.

The small amount of research shows that patients are mainly used as plot devices for medical shows. According to Jacobs (2003), patients on medical shows can be classified as either "reflectors" (p. 120) or problems. Reflectors are patients whose actions and thoughts provoke the doctors "into introspection or a change of mind" (p. 120). Most patients are presented as problems for the doctors; "one of the chief problems hospital staff encounter is their patients" (p. 119). Patients are seen as annoyances and disruptions and are often painted in a very negative light. As Jacobs (2003) describes:

"Patients often present a set of physical and moral puzzles that the doctors need to solve, and are frequently a danger to themselves and others. Some fake their illnesses (Munchausen's syndrome) either to get attention, or to avoid some other responsibility; others are violent or abusive. Patients who refuse treatment are frequently depicted as suffering either mental disturbance or, in the case of male patients, from a macho refusal to be cared for." (p. 119).

In their examination of *Chicago Hope* and *ER*, Makoul and Peer's (2004) also came to the conclusion that patients are usually framed as trouble or troubled (p. 258). They found that patients were rarely seen and hardly spoke. When patients were shown, on *ER* they were most often portrayed as crazy/irrational, anxious/afraid,

demanding/annoying, or unconscious/dead. On *Chicago Hope*, the patients were mostly demanding/annoying (p. 254). Morgan et al. (2007) examined portrayals of organ donation on prime time television and found that most patients in need of an organ donation were portrayed as undeserving and ungrateful. Although these portrayals are used for dramatic purposes, it could lead to negative consequences. As Makoul and Peer (2004) explain:

“While this particular portrayal of patients may serve the demand for drama in the shows or provide suitable background for the unfolding stories about doctors, it also raises questions about messages these shows sent during the 1996-1997 season, particularly about patients” (p. 258).

#### **1.4.5 Hospital Administrators, Patients’ Relatives and Friends**

The research on other characters in medical shows is even smaller than the research on nurses and patients. Hospital administrators are not typically major characters on medical shows, but when they do appear, it is usually in a negative light. Like troublesome patients, management interference is one of the medical staff’s chief problems (Jacobs, 2003, p. 119). Typically, hospital administrators play the role of authority figures that the doctors heroically defy (Vandekieft, 2004, p. 220)

Like administrators, patients’ relatives and friends are hardly studied. In a content analysis of popular television doctor dramas from September 2000 through May 2001, Turow and Gans (2002) found that relatives and friends do not usually appear in medical dramas. When they do, it is normally in a negative light as “it is hard to avoid the impression that television’s hospital series often portrayed the opinions of patients’ relatives and friends as a nuisance in health policy discussions” (p. 19).

#### **1.4.6 Medical Staff- Patient Interactions**

How does television portray interactions between the medical staff and patients? This is a very important research area to consider for a few reasons. First of all, social cognitive theory suggests that viewers could model the behavior they see on television. As Brownstein (2009) reports, some medical students are modeling the behaviors of their favorite television doctors. Most viewers, however, will be patients, so it is also important to see what types of behaviors they potentially could be learning. Research shows that patients who are active participants in their health interactions are more satisfied with their care, more committed to treatment, and even have better health after their visits (Street, Jr. & Millay, 2001), so how television portrays these interactions could have serious consequences. Another reason this is important to investigate is that cultivation theory suggests that viewers could develop perceptions of the world that mimic the world shown on television. Researchers have found that certain types of interactions directly impact the level of satisfaction patients have with their health care (Buller & Buller, 1987; Haskard, DiMatteo, & Heritage, 2009; Wanzer, Booth-Butterfield, & Gruber, 2004). If viewers see negative interactions on television, they might believe this is how all interactions with medical staff will be and limit their visits. If television's interactions are positive, viewers could be disappointed with their own interactions if they do not live up to expectations.

What kind of interactions lead to patient satisfaction? Buller and Buller (1987) surveyed 219 patients on their physician's communication style and level of satisfaction with their health care. They found that positive evaluations of a physician's communication style accounted for almost three-quarters of the variance in the evaluations of medical care (p. 384). An "affiliative" communication style, such as being encouraging, friendly, relaxed, open, empathetic, attentive, and listening

carefully, was associated with positive evaluations. A dominant communication style, which included coming on strong, dominating the conversation, and being argumentative and dramatic, was associated with negative evaluations. Other research supports these findings. Wanzer et al. (2004) found in a survey of 195 parents of child patients that introducing oneself, listening, using immediacy behaviors, and being friendly, clear, empathetic, and warm were all very important to patient satisfaction. McCabe (2003) notes that for nurse-patient interactions, the most common complaint from patients is a lack of communication with the nurses, and Shattell (2004) notes that when evaluating the care delivered by nurses, the most important aspect to patients was the interpersonal interaction. Haskard et al. (2009) analyzed patient-nurse interactions and surveyed the patients on their level of satisfaction. They found that patients were less satisfied with communication that was negative in tone or when the nurses looked too busy. Instead, patient satisfaction was related to empathy, positivity, warmth, energy, friendliness, and a caring attitude from nurses.

Most of the research to date shows that interactions with patients on television are not very similar to those preferred by real life patients. Makoul and Peer (2004) analyzed doctor-patient interactions on *Chicago Hope* and *ER*. Interactions were classified as active-passive, guidance-cooperation, or mutual participation. Active-passive interactions occurred when the “physician decided or did everything in the encounter because there was no opportunity or no possibility for discussion” (p. 251) due to the fact that the patient was unconscious or needed immediate treatment. Guidance-cooperation interactions referred to the physician giving orders for the patient to follow with the patient being uninvolved in decision-making, and mutual participation interactions occurred when both the physician and patient discussed and

actively participated in the treatment decision. Makoul and Peer found that active-passive interactions were the most common on both *ER* and *Chicago Hope*. *ER* had more instances of guidance-cooperation, whereas *Chicago Hope* had more mutual agreement interactions. However, there were not many interactions on these shows overall; Makoul and Peer found that physician-patient dialogue occurred in only 16 percent of scenes that included a physician. As patients are almost always in a passive role, they concluded that doctors have the interpersonal power (p. 258).

Turow and Gans (2002) analyzed popular television doctor dramas from September 2000 through May 2001 and found that most arguments about health policies and health care occurred between doctors. Patients and nurses were found to be much less involved in arguments about health care (p. 19). In their overview of medical shows, Turow and Gans-Boriskin (2007) summarize, “as in the past, nurses, social workers, and other members of the health care team hardly exist when issues are debated. Likewise, patients and their friends and relatives appear to have little impact on health care decisions” (p. 280). Physicians do not typically interact with their patients in advertisements either. As Signorielli (1993) describes:

“Physicians are rarely shown talking to patients, nurses, or even each other; rather physicians are seen in relation to the machines they use—they manipulate the technology that makes the diagnosis. When doctors are shown talking to patients, they are usually placed in a position of prominence so their authority is affirmed” (p. 47).

In contrast to the other research, Murphy et al.’s (2008) analysis of the top ten fictional shows on prime time during the 2004, 2005, and 2006 spring television seasons found that half of all the health-related storylines depicted a health care

interaction that was helpful and productive. The researchers did not detail who controlled the interaction and who did most of the talking, but they did find that strained or unproductive interactions were rare.

#### **1.4.7 Illness and Disease on Television**

Patients might not interact frequently with the medical staff because they are normally unconscious. The illnesses and ailments shown on television are normally rare and have visual symptoms. Murphy et al. (2008) found that one in four illnesses shown were rare or unusual, and as Jacobs (2003) describes, medical shows are a “zoo of medical oddities” (p. 119). Murphy et al. (2008) found that the most common health storyline concerned characters afflicted with an unusual illness or disease. In their sample, rare ailments appeared 4 more times than heart disease, 5 more times than cancer, and 20 more times than diabetes. Many of the new medical dramas also feature traumatic injuries. “The explicit visualization of emergency treatment was one of the most distinctive features of the new hospital drama. Graphic depictions of serious injury became the norm with bleeding wounds, screaming patients...” (Jacobs, 2003, p. 54). Turow (1996) found illnesses are almost never depicted as chronic on television and also tend to be cured. In many medical dramas, technology is seen as the cure for disease and ailments and as triumphing over nature (Harter & Japp, 2001). As Signorielli (1993) describes, doctors normally use drugs and machines to cure the patient.

#### **1.4.8 Mental Illness on Television**

In addition to physical illness, mental illness is also depicted on television. Signorielli (1989) analyzed the presentation of mental illness in 17 composite weeks

of prime time television from 1969 to 1989 collected for the Cultural Indicators Project. One-fifth of all the programs in the study contained a depiction or theme of mental illness, and there was also no increase or decrease in the appearance of mental illness over time. About three percent of all characters were classified as mentally ill and these characters were more likely to be in serious roles and to be labeled as “bad”. These characters were also often portrayed as failures; 40.5 percent of mentally ill characters were failures compared to the 18.4 percent of all characters. Employment on television from 1973 to 1985 was also analyzed, and Signorielli found that the mentally ill were less likely to be employed on television compared to all other characters. Of those who were employed, over half were shown as failures; only 15.2 percent of other employed characters were shown as failures. As Signorielli (1989) summarizes, “the impression conveyed is that mentally ill characters are quite likely to fail, and probably in the area of work” (p. 329). Gerbner et al. (1982) found the depiction of the mentally ill has not been positive; the mentally ill on television are the group most likely to commit violence as well as be victims of violence. In a more recent study, Diefenbach (1997) compared estimates of real world violent crime rates for ex-mental patients for a 52-week period to the rate shown on a composite 2-week sample of network prime time programming in fall 1994. He found the violent crime offender rate among the mentally ill shown on television was significantly higher than the actual estimated rate in the United States. The observed offender rate was also ten times higher for mentally ill characters than it was for the general population of television characters. In contrast to Signorielli (1989) and Gerbner et al. (1982)’s findings, Diefenbach (1997) found that the mentally ill were portrayed as victims less frequently than they were as perpetrators; in fact, the mentally ill were criminals four

times as often as they were victims. In addition to this, the mentally ill were also shown the group with the lowest quality of life. As Diefenbach (1997) describes, “according to television, it is better to be a victim of violent crime, or a violent criminal than mentally ill if one is to have a better quality of life” (p. 298). In a sample of children’s television programs, Wahl, Hanrahan, Karl, Lasher, and Swaye (2007) found mental illness was uncommon but slang terms for the mentally ill were commonly used in a disparaging manner. Granello (2000) found these negative depictions might have an impact; in a survey, he found that the more television people watched per week, the more likely they were to be intolerant toward people with mental illness. As Signorielli (1993) describes, the mentally ill have historically been stigmatized in society and television has perpetuated these negative images.

#### **1.4.9 Health Care Locations**

Most illnesses on television are treated in a hospital setting. On older doctors shows, 61 percent of medical treatments by doctors occurred at the patient’s home or in the field (Gerbner et al., 1982), but now “on TV, intense, emergency-oriented work is typically the hospital’s game” (Turow, 1989, p. 270). The emergency room setting is perfect for television as it creates drama and suspense with the onslaught of unexpected accidents and serious, life-threatening injuries (Jacobs, 2003). Murphy et al. (2008) found that one out of every two health treatments occurred in a health care setting as opposed to work, school, home, or outdoors.

#### **1.4.10 Gender of Characters**

There appears to be a gender bias in television’s depictions of medicine. On the earlier doctor shows, female medical professionals were portrayed unfavorably

(Jacobs, 2003), if they were portrayed at all. Gerbner et al. (1982) found that nine out of every ten doctors on television were young or middle-aged, white males and nearly all nurses were females. When women were shown they were either romantic interests for the male doctors or “emptied of their traditional feminine traits, becoming monstrous reversals of nurturing carers [*sic*]” (Jacobs, 2003, p. 94). Female doctors also had problems attempting to balance their career with their romantic life; male doctors never encountered this problem (Vandekeift, 2004). Gerbner et al. (1982) found that female doctors were shown in a more negative light than male doctors, as females were commonly portrayed as more emotional and less professional. Female patients were also more often bedridden than male patients and to have strong man by their side, whether a husband, family member, or a doctor (Gerbner et al., 1982). Gerbner et al. (1982) also found that doctors gave more orders to females, whether they were nurses or patients.

This image has changed, however. It started to change in the 1970s with the feminist movement and continued into the 1990s as women doctors became more visible on television (Jacobs, 2003). In Chory-Assad and Tamborini’s (2001) content analysis, 61.6 percent of the physicians on television were male, so the number of female physicians on television has risen since Gerbner et al.’s (1982) analysis found only 10% of doctors were female. Jacobs (2003) notes that although there are more female doctors on television, many are portrayed as drained of their femininity.

## **1.5 Research Questions and Hypotheses**

Based on the research reviewed and the goals of this study, the following section formally states the research questions and hypotheses to be tested.

### 1.5.1 Major and Minor Characters

As stated previously, today's medical shows are centered on doctors and both the personal and professional problems they encounter. Past research has shown there has been an abundance of doctors and nurses on television, but nurses are typically found in secondary roles. Since the shift to doctor-centered plots, patients have been relegated to minor roles used to move the plot along. Other medical professionals, such as hospital administrators and patients' relatives and friends, are practically nonexistent on television. Based on this, the following have been hypothesized:

**H1: Doctors are more likely than nurses, hospital administrators, patients, and patients' relatives/friends to be major characters.**

### 1.5.2 Character Traits

Existing research shows that, in recent years, the portrayal of doctors has become more negative. As Chory-Assad and Tamborini (2001) note, however, fictional programming still shows doctors in a mostly positive light. Doctors are complex characters; they perform courageous acts to save their patients, but they also have personality flaws. In overall tone, however, doctors are positive characters and should have some positive characteristics, such as being intelligent, charismatic, nice, caring, or sociable. On television, a doctor typically is portrayed as a 'good person'. This leads to the following hypotheses and research question:

**H2: Doctors are more likely to be portrayed as positive than negative.**

**H3: Doctors are more likely to be portrayed as heroes than as villains.**

**H4: Doctors will be shown dealing with their own personal problems more than curing or caring for patients.**

Historically, as secondary characters, nurses have not been portrayed favorably. But with television's new focus on nurses, this might change. This leads to the following research question:

**RQ1: How will nurses be portrayed?**

Patients are normally portrayed as troubled or as trouble for the doctors; the patients are crazy, anxious, and demanding. If they are not portrayed negatively, they are unconscious or dead. Hospital administrators typically have small roles as the authority figures that doctors defy in order to save their patients. Although patients' relatives and friends are hardly shown on television, when they are, they normally are shown as a nuisance to the medical staff. Therefore, patients, their relatives and friends, and hospital administrators will most likely be portrayed negatively; they should be shown as annoying, mean, selfish, irresponsible, uncaring, or unfriendly. All in all, these characters should be portrayed as 'bad people'. In addition to having a negative valence overall, these characters might also engage in destructive or "bad" personal behaviors. But they are not the only characters who might behave badly; doctors might too. Doctors have increasingly been shown as personally flawed. They are heroes in their job, but the programs tend to focus less on doctors saving patients and more on doctors dealing with their own personal problems. Thus, these programs might show doctors engaging in destructive or "bad" personal behaviors. This leads to the following hypotheses and research questions:

**H5: Patients are more likely to be portrayed as negative than positive.**

**H6: Hospital administrators are more likely to be portrayed as negative than positive.**

**H7: Patients' relatives and friends are more likely to be portrayed as negative than positive.**

**RQ2: Of doctors, nurses, patients, hospital administrators, and patients' relatives/friends, who will engage in destructive and "bad" behaviors, such as smoking, drug abuse, excessive drinking, violence, and criminal behavior? What behaviors are seen most frequently?**

Physically ill characters are typically portrayed negatively, but the mentally ill have been shown as engaging in the extremes of negative behaviors. Mental illness has been stigmatized on television; mentally ill characters are normally portrayed as dangerous and threatening. Previous research has found that the mentally ill are the group most likely to commit violence and also be victims of violence. This leads to the following hypotheses:

**H8: Mentally ill characters are more likely to be portrayed as negative than physically ill characters.**

### **1.5.3 Patients**

Another focus of this study is on the patients. Research has shown that patients tend to be negative characters, but who are these patients? Due to the dramatic and visual nature of television, the medical conditions shown are usually trauma-related or rare. But who gets these rare conditions on television? Do their actions, such as lifestyle choices, cause their conditions or are they just victims of circumstance? This leads to the following hypotheses and research questions:

**H9a: There will be more trauma-related injuries than common illnesses such as heart disease, cancer, diabetes and cold/flu.**

**H9b: There will be more rare illnesses than common illnesses such as heart disease, cancer, diabetes and cold/flu.**

**RQ3: What demographic groups are typically shown as ill on television?**

**RQ4: Are patients typically shown as causing their condition through their actions or lifestyle?**

Also, what tends to be the outcome of medical treatment? A good amount of the literature explained that doctors are making mistakes on television (Jacobs, 2003; Vandekieft, 2004), but are these doctors constantly making mistakes? Chory-Assad and Tamborini (2001) found that those making mistakes were both expert doctors and unskilled doctors on television. Makoul and Peer (2004) found that the doctors on ER and Chicago Hope were mostly commonly seen as both vulnerable/struggling and competent/expert. So, are patients typically cured or do they get sicker for seeking medical help? This leads to the following research question:

**RQ5: What is the typical outcome of medical treatment?**

Where do patients go for medical help? A majority of medical dramas take place in a hospital or hospital emergency room, as it allows for a constant influx of patients and problems for the doctors. There could be other places that patients go for medical treatments, but the emergency room tends to be the most common. This leads to the following hypothesis:

**H10: The majority of treatment will take place in a hospital, particularly the ER.**

#### **1.5.4 Interactions with Patients**

Research on doctor-patient interactions on television shows they are different than those desired by real life patients. Doctors and patients do not interact

much, and when they do, doctors tend to make most of the decisions about treatment. Patients are often regulated to a passive role when interacting with their physicians on television. This leads to the following hypotheses:

**H11: Doctors will interact with other doctors more than with patients.**

**H12: Patients will be passive participants in their health care decisions when interacting with doctors.**

Nurse-patient interactions on television have not been analyzed, but research shows they are very important to patient satisfaction in the real world. This leads to the following research questions:

**RQ6: How often will nurses interact with patients?**

**RQ7: Will patients be active participants in their health care decisions when interacting with nurses?**

There is also not much research on the demeanor of physicians and nurses when interacting with patients on television. Murphy et al. (2008) found that interactions were normally not strained, but they did not specifically examine the medical staff's demeanor during these interactions. Researchers have found that patients are more satisfied with doctors with an "affiliative" communication style, or those who are encouraging, friendly, relaxed, open, empathetic, attentive, warm, and good listeners. Dominant communication styles, such as dominating the conversation and being argumentative and dramatic, are less desirable to patients. Research has not shown whether doctors are typically good listeners or encouraging on television, but it has shown that doctors tend to have the authority and interpersonal power when interacting with patients. Patients also want nurses to be empathetic, friendly, warm,

energetic, positive and caring. This leads to the following hypothesis and research question:

**H13: Doctors are more likely to have a dominant communication style than an affiliative communication style when interacting with patients.**

**RQ8: Will nurses have dominant communication styles when interacting with patients or affiliative communication styles?**

It would also be interesting to note what topics patients and medical professionals discuss during interactions. They could solely focus on medical topics, such as symptoms or treatment decisions, but they could also have interactions about more personal topics. Medical professionals' communication styles might be different depending on the topic as well; for example, it could also be possible that doctors only adopt a dominant communication style when talking about medicine. This leads to the following research questions:

**RQ9: What do medical professionals and patients typically discuss during interactions?**

**RQ10: Does communication style relate to interaction topic?**

### **1.5.5 Attitudes about Patients**

Because of the possibly large number of unconscious patients and their lack of screen time as minor characters, there might be only a small number of interactions that involve patients. However, the medical staff might talk or express their feelings about the patients and these comments could be revealing. Because patients are normally problems for the hospital staff, the following is hypothesized:

**H14: The medical staff's attitude toward patients is more likely to be negative than positive.**

## **Chapter 2**

### **METHODS**

To test the hypotheses, a content analysis was conducted. According to Morgan and Signorielli (1990) there are three research components of the cultivation perspective. The first (institutional process analysis) examines “the institutional processes underlying the production of media content” (p. 15). The second component of cultivation research (media message analysis) is a content analysis of television content, and the third component (cultivation analysis) examines, using survey methodology, the relationship between television viewing and conceptions of social reality. To conduct a cultivation analysis, a researcher must first perform a content analysis because cultivation survey questions should be based on the findings from the systematic analysis of content (Morgan & Signorielli, 1990); researchers cannot test whether or not viewers’ conceptions of reality match the reality depicted on television if they do not know what is depicted on television. As Gerbner (1990) explains, “helter-skelter and exploratory questioning may be useful for a variety of theoretical and serendipitous purposes but do not test cultivation theory” (p. 257). Therefore, uncovering the content of television is a crucial step to understanding its effects and is the one undertaken in this study.

#### **2.1 Sample**

The purpose of this study is to examine the portrayals of medicine on television. A composite week of prime time network programming broadcast during

September and October 2009 was the primary sample for this study. This sample was also used for data collection in an upper level undergraduate communication course during the Fall 2009 semester. Many studies of television content have used a composite week of programming as the sample (e.g., Byrd-Brenner et al., 2003; Chory-Assad & Tamborini, 2001), and as Signorielli (1981) notes, a week of programming is an adequate sample size for a general study of television content. Due to its popularity, prime time broadcast programming (ABC, CBS, FOX, NBC, and CW) comprised the composite week. Although broadcast networks are losing some of their audience to cable television, broadcast television still continues to reach the largest audiences. Due to this and the fact that most previous studies have focused on prime time broadcast programming (e.g., Byrd-Bredbenner et al., 2003; Gerbner et al., 1982; Murphy et al., 2008), these programs comprised the main sample for analysis in this study. This study focused on the medical shows in this sample. To ensure an adequate sample size, a second episode from the Fall 2009 season of each medical program was added to the sample.

Despite the reigning popularity of broadcast programming, cable television's audience share is growing. Consequently, an additional sample of three medical programs on cable, USA's *Royal Pains*, TNT's *HawthoRNe*, and Showtime's *Nurse Jackie*, was generated. Two episodes of each program were recorded during the summer of 2009. These three programs were chosen because of their popularity during the summer television season (Seidman, 2009; 2009a; 2009b) as well as their unique subject matter. Two programs, *HawthoRNe* and *Nurse Jackie*, focus primarily on nurses, and *Royal Pains* portrays the world of a concierge doctor (a doctor who makes house calls) in the Hamptons, N.Y.. Analyzing this additional sample of

summer cable programs added a dimension of data and understanding of medical portrayals on television.

## **2.2 Units of Analysis and the Coding Procedure**

In order to test the hypotheses, the sample was analyzed at both the television program level and at the character level. Two separate recording instruments were created for these different units.

Undergraduates in a 400-level communications course conducted a preliminary analysis of the main sample of the study. In this preliminary analysis, coders analyzed the sample at both the program level and character level. At the program level, coders identified which programs contained health portrayals and which illnesses were shown. At the character level, coders identified characters' occupations and whether they were shown as ill or seeking medical treatment.

Following this preliminary analysis, an in-depth analysis of the programs and characters identified as being of interest to this study was conducted. The following describes the recording instruments in-depth.

### **2.2.1 The Program**

The first unit of analysis was the television program. A television program was operationalized as an entire episode of a series, normally thirty minutes to an hour in duration. As they normally begin with a title or opening sequence and conclude with ending credits, these programs were easy to identify. Commercials were not included in the analysis.

### **2.2.1.1 The Program Recording Instrument**

The recording instrument for the program can be found in Appendix A (pp. 101-103). Descriptive elements of each program, such as the date and time of broadcast, the duration, the format and the program type were recorded. The program tone (whether it was mostly comic, serious, or both), the overall racial makeup of the cast, and the main setting of the program were also noted.

After the descriptive elements were recorded, the program's themes were identified. A program can focus on a number of aspects of life or themes, such as law enforcement, crime, family, and many more. For this study, coders identified themes of mental illness, physical illness and injury, and physical disability and how significant these themes were to the program's plot. A theme could be a minor part, a significant part, or the outstanding focus of the plot. This coding scheme allows comparison to Murphy et al.'s (2008) study, which classified health-related content in prime time programming as references to "disease, injury, or disability" (p. 15) and also noted the content's prominence within the program. Murphy et al. (2008) did not provide reliability measures for each individual variable in their report, but every variable reached at least a level of 77 percent agreement and the average score was 95 percent. In addition to these themes, coders also recorded the appearance of health portrayals. Health portrayals included the discussion or depiction of injury, illness, or disease by either those suffering from them or by medical professionals. These themes were all identified during the preliminary analysis.

In addition to themes of illness, coders also identified which illnesses were depicted and their severity. Coders noted if cancer, heart disease, diabetes, cold/flu, injury, or other ailments appeared in programs and whether they were shown as minor (an illness that does not interfere with everyday life), moderate (an illness that

interferes with everyday life but is not life-threatening), or severe (a life-threatening illness). This coding scheme also allows for comparison with Murphy et al.'s (2008) findings, as they also identified which illnesses were shown in prime time. Like themes, illnesses were identified during the preliminary analysis.

Following the preliminary analysis, the researcher conducted an in-depth analysis of programs identified as containing health-related themes.

## **2.2.2 The Characters**

The other unit of analysis in this study was the character. Any medical character who was classified as a major character or as involved in a health care interaction was analyzed. Major characters were characters who were absolutely essential to the plot; if these characters were removed, the story could not be told. All other characters were classified as minor.

### **2.2.2.1 The Character Recording Instrument**

The recording instrument for the characters can be found in Appendix B (pp. 104-113). Demographic information, such as gender, race, ethnicity, marital status, social age, chronological age, occupation, and social class were coded for all characters. The character's medical role (doctor, nurse, patient, patient's relative or friend, hospital administrator, or other medical professional) was also coded.

To examine whether characters are being portrayed positively or negatively, coders identified each character's overall behavior throughout the program as positive, negative, or neutral. In addition to this, the character's type was noted; was the character playing the role of "good" hero type, "bad" villain type, or a mixed type? In addition to overall classifications, coders also noted whether characters

specifically engaged in socially discouraged behaviors, such as drug use, alcohol abuse, smoking, criminal behavior, and immoral violence.

The illnesses and disabilities of the characters were recorded. It was noted if a character was mentally ill and the status of their mental illness (in control of the disease or not), and if a character was physically disabled and the severity of the disability. A character's physical illness or disease was also coded. The type of illness, (cancer, heart disease, diabetes, cold/flu, injury, or other), and the severity of the ailment was coded. If a character was ill, it was also noted whether or not they receive treatment and the location of all their treatments. The outcome of the medical care was also recorded using the same category scheme as Murphy et al.'s (2008) study. It was also noted if the program depicted the character as responsible, either through their lifestyle choices or behavior, for their condition.

For medical professionals, coders identified both their attitudes towards patients and their modes, or storylines, throughout the program. To gain more insight on how patients were portrayed on television, medical professionals' attitudes toward patients were coded. Medical professionals' attitudes toward patients were operationalized as "the comments or expressions made about feelings toward patients or beliefs about patients."-. Coders classified the character's overall attitude as positive, negative, or mixed. The modes of the medical professional were also coded. Makoul and Peer (2004) coded each scene that a physician appeared in as either:

“Caring (primarily concerned for the patient's feelings, comfort, and family),  
curing (focused on the patient's physical condition and treatment),  
administrative (chief role was as a manager of resources, including other health  
care workers), business (focused on budget concerns, insurance problems, or

other monetary issues), education (primarily involved in role as a teacher or learner), and personal (dealt with issues in personal life apart from role as a caregiver)” (pp. 250-251).

This same category scheme was used for this study, except coders identified all of the modes for each medical professional throughout the program and how focused each mode was for the character’s storyline (minor or major focus). For data analysis, the scale ranged from 0 (character was not shown in this mode) to 2 (this mode was a major focus of this character’s storyline).

As one of the main focuses of this study was to examine the interactions between medical professionals and patients, a coding scheme was devised for this purpose. Previous studies have examined health care interactions by analyzing every scene in a program (Makoul & Peer, 2004). However, due to time constraints, this technique was not practical. An alternative approach, coding health care interactions at the character level, was used. A health care interaction was operationalized as “any interpersonal interaction between a medical professional and a patient/patient’s representative.” For each character, coders counted the number of health care interactions. Coders then examined the character’s communication style during interactions. According to Buller and Buller (1987), patients prefer doctors with an “affiliative” communication style to doctors with a dominant communication style. An “affiliative” communication style was operationalized as 3. A dominant communication style was operationalized as “coming on strong, dominating the conversation, being argumentative and dramatic, and being unfriendly, cold, and inattentive”. Coders identified how often the character interacted with each communication style (affiliative, dominant, and mixed/neutral) throughout the

program on a global scale; a character could use that communication style in no interactions, a few interactions, a moderate number of interactions, or most interactions. In data analysis, this scale ranged from 0 (no interactions with this communication style) to 3 (most interactions with this communication style).

The general topics of health care interactions were also coded on a global scale. Medical professionals and patients could potentially discuss anything, but on television they generally talk about symptoms, medical history, causes of illnesses, treatment options/decisions, personal problems of both the medical staff and patient, other interpersonal topics, general small talk, or other topics. For each of these topics, coders identified how often the character had interactions based on this topic (no, few, moderate, or most interactions) and the character's communication style for each topic (no interaction, mostly dominant, mostly affiliative, both dominant and affiliative, mostly neutral). For frequency, the scores on the scale ranged from 0 (no interactions on this topic) to 3 (most interactions on this topic). For communication style, the data was recoded for analysis. A scale was created that ranged from 1 (mostly dominant) to 3 (mostly affiliative). The categories of "both dominant and affiliative" and "mostly neutral" were collapsed into one and landed in the middle of the scale (2).

The level of patient participation for the interactions was also noted. Street, Jr. and Millay (2001) describe patient participation as "the extent to which patients produce verbal responses that have the potential to significantly influence the content and structure of the interaction as well as the health care provider's beliefs and behaviors" (p. 62) and this is how it was operationalized for this study. Acts such as asking questions, describing health experiences, making suggestions, disagreeing or interrupting, giving opinions, and stating preferences are all examples of participative

behaviors (p. 62). For each character, coders indicated the frequency of the character's involvement in medical interactions for each level of patient participation. The different levels included: no participation because the patient was unconscious or in a state of emergency; no participation because the patient was a child; passive participation, meaning the patient was physically and mentally able to participate but did not; moderate participation, meaning the patient participates to a limited extent; or active participation, meaning the patient participates. The character could have no interactions at each level, a few interactions, a moderate number of interactions, or most of their interactions were at that level of patient participation. Scores on the scale could range from 0 (no interactions at this level of patient participation) to 3 (most patient participation occurred at this level).

Lastly, coders identified with whom each character interacted. This included all interactions, not just those designated as health care interactions. A character could interact with doctors, nurses, patients, patients' family and friends, hospital administrators, or other characters in no interactions, a few, a moderate number, or most interactions. The scale ranged from 0 (no interactions with this character type) to 3 (most interactions were with this character type).

### **2.3 Coder Training**

For both the preliminary analysis and main analysis, training was conducted. Training included in-depth discussions of the coding process and the recording instrument, as well as hands-on practice coding programs. Any difficult or unclear definitions were discussed and edited prior to the main analysis.

## 2.4 Reliability Analysis

The primary researcher and an undergraduate communication major coded the entire sample for reliability purposes. Inter-coder reliability was measured using Krippendorff's alpha and only variables reaching an acceptable level of .67 or above (Krippendorff, 2004, p. 241) were included in data analysis. When a variable lacked a sufficient number of observations, a percent agreement score was provided.

**Table 2.1 Program reliability: Krippendorff's Alpha for program variable**

Variable Name	Alpha
Time	.88
Network	1.00
Duration	.87
Program Type	1.00
Tone	.76
Cast: Race	.25
Mental Health	.89
Physical Illness	.68
Physical Handicap	.88
Health Portrayals	.59
Cancer- Severity	.90
Heart- Severity	1.00
Diabetes- Severity	.68
Cold/Flu- Severity	0.0 (100%)
Injury- Severity	1.00
Other- Severity	.72

Note: Percent agreement scores in parentheses.

**Table 2.2 Character Reliability: Krippendorff's Alpha for character for variables**

Variable Name	Alpha	Variable Name	Alpha
Status	.78	Mode- Caring	.94
Medical Role	.98	Mode- Curing	.94
Occupation	.99	Mode- Admin.	.90
Gender	.92	Mode- Business	.91
Race	.80	Mode- Education	.94
Ethnicity	.92	Mode- Personal	.92
Martial Status	.79	# of Interactions	.98
Sexual Orientation	.82	Dominant Comm.	.98
Chronological Age	.88	Affiliative Comm.	.96
Social Class	.67	Mixed Comm.	.91
Role	.38	Freq- Symptoms	.95
Type	.86	Freq- Medical History	.96
Overall Behavior	.87	Freq- Causes	.97
Drug Use	.91	Freq- Treatment	.96
Smoking	0.0 (100%)	Freq- Medical Problems	.97
Drinking	.95	Freq- Patient Problems	.97
Drinking-Acceptability	.85	Freq- Small Talk	.97
Violence	.83	Freq- Other Interpersonal	.94
Crime	.77	Freq- Other	.94
Victimization	.81	Comm.- Symptoms	.93
Mental Illness	.90	Comm.- Medical History	.96
Physical Disability	.91	Comm.- Causes	.94
Physical Illness	.97	Comm.- Treatment	.95
Cancer	.92	Comm.- Medical Problems	1.00
Heart Disease	.88	Comm.- Patient Problems	.94
Diabetes	1.00	Comm.- Small Talk	.98
Cold/Flu	0.0 (100%)	Comm.- Other Interpersonal	.90
Injury	.91	Comm.- Other	.90
Other	.98	Pat. Participation-Unconscious	.92
Responsible Illness	.94	Pat. Participation-Child	.96
Treatment	.98	Pat. Participation-Passive	.96
Loc-ER	.46	Pat. Participation-Moderate	.94
Loc-Hospital	.84	Pat. Participation-Active	.96
Loc-Primary Care	0.0 (100%)	Interact- Doctors	.95
Loc-Specialist	.80	Interact- Nurses	.97
Loc-Clinic	0.0 (100%)	Interact- Patients	.88
Loc-Home	.91	Interact- Family/Friends	.98
Loc-Other	.90	Interact- Hospital Administrators	.91
Outcome	.92	Interact- Other Health Care	.97
Med Attitude	.86	Interact- Other	.87

Note: Percent agreement scores in parentheses.

## 2.5 Data Analysis Techniques

A few different types of statistical analyses were utilized to test the hypotheses. For many of the analyses, chi-square goodness-of-fit tests or chi-square cross tabulations were performed. Chi-square tests examine the difference between the observed frequencies and the expected frequencies for one or more categorical variables (Hayes, 2005). Alpha levels were set at  $\alpha = .05$ . Additionally, for cross tabulations greater than 2x2, adjusted residuals were calculated. Residuals are the numerical difference between the observed frequency and the expected frequency for a cell, and adjusted residuals are their standardized values. If the absolute value of the adjusted residual is greater than 1.96, the observed value is significantly different than the value expected by chance, and it can be concluded that the cell significantly contributed to the chi-square value (Hayes, 2005). For the scale data, series of paired-samples t-tests were conducted to compare multiple variables. A paired-samples t-test analyzes the difference between the means of two different measurements. As multiple comparisons can increase the chance of committing a Type I error (Hayes, 2005, p. 405), for any test where series of paired-samples t-tests were performed, alpha levels were set to  $\alpha = .01$ .

## **Chapter 3**

### **RESULTS**

#### **3.1 Description of the Sample- Program**

A total of 23 television episodes, amounting to 21 hours of programming, were analyzed. The episodes came from 13 different television programs, the distribution of which can be seen in Table 3.1. The sample consisted of programs from the five broadcast networks (ABC, CBS, NBC, FOX, and CW) and three cable channels (TNT, USA, and Showtime). Table 3.2 shows the number of episodes each network contributed to the sample. Almost 9 out of 10 episodes (87%) were classified as dramas and three episodes (13%) were situation comedies.

**Table 3.1 Frequency of Programs**

<b>Television Program</b>	<b>Number of Episodes <i>N</i></b>
Mercy	3
Trauma	2
Grey's Anatomy	2
Private Practice	2
House	2
Scrubs	2
HawthoRNe	2
Royal Pains	2
Nurse Jackie	2
Three Rivers	1
2 ½ Men	1
Eastwick	1
Melrose Place	1
Total	23

**Table 3.2 Episodes by Network**

<b>Network</b>	<b>Number of Episodes <i>N</i></b>	<b>Percent %</b>
ABC	7	30.4
NBC	5	21.1
CBS	2	8.7
FOX	2	8.7
CW	1	4.0
TNT	2	8.7
USA	2	8.7
SHOWTIME	2	8.7
TOTAL	23	100.0

### 3.2 Description of the Sample- Characters

There were a total of 238 characters in the sample. As shown in Table 3.3, there were slightly more male (54.6%) than female (45.4%) characters. Table 3.4 illustrates the racial distribution of the characters. The majority of characters were white (79.8%), 13.4% were black, and the remaining were Asian (3.4%), Native American (.4%), and other (2.9%). Ethnicities are shown in Table 3.5. The majority of characters were of European/Scandinavian descent (73.1%), with Hispanic/Latino (6.3%), Middle Eastern/Indian (4.2%), and other (16.4%) rounding out the sample. Ages ranged from 4 to 80 years old. The majority were young adults, between 21-30 (34.9%), middle-aged, 31-40 (23.9%), or 41-50 (25.2%) (see Table 3.6). As shown in Table 3.7, the majority of characters were classified as straight (94.5%). Table 3.8 examines the characters' social class. Most characters were middle class, with 40.3% in the upper middle and 51.3% in the lower middle; about one in twenty (5.9%) were upper class and 2.5% were lower class.

**Table 3.3 Frequency of Gender**

<b>Gender</b>	<b>Frequency <i>N</i></b>	<b>Percent %</b>
Male	130	54.6
Female	108	45.4
TOTAL	238	100.0

**Table 3.4 Frequency of Race**

<b>Race</b>	<b>Frequency <i>N</i></b>	<b>Percent %</b>
White	190	79.8
Black	32	13.4
Asian	8	3.4
Native American	1	.4
Other	7	2.9
TOTAL	238	100.0

**Table 3.5 Frequency of Ethnic Background**

<b>Ethnicity</b>	<b>Frequency <i>N</i></b>	<b>Percent %</b>
European/Scandinavian	174	73.1
Hispanic/Latino	15	6.3
Middle Eastern/Indian	10	4.2
Other	39	16.4
TOTAL	238	100.0

**Table 3.6 Frequency of Age**

<b>Age</b>	<b>Frequency <i>N</i></b>	<b>Percent %</b>
0-10	5	2.1
11-20	20	8.4
21-30	83	34.9
31-40	57	23.9
41-50	60	25.2
51-60	6	2.5
61-70	2	.8
71-80	5	2.1
TOTAL	238	100.0

**Table 3.7 Frequency of Sexual Orientation**

<b>Sexual Orientation</b>	<b>Frequency <i>N</i></b>	<b>Percent %</b>
Straight	225	94.5
Gay/Lesbian	9	3.8
Bisexual	3	1.3
Cannot Determine	1	.4
TOTAL	238	100

**Table 3.8 Frequency of Social Class**

<b>Social Class</b>	<b>Frequency <i>N</i></b>	<b>Percent %</b>
Upper	14	5.9
Upper Middle	96	40.3
Lower Middle	122	51.3
Lower	6	2.5
TOTAL	238	100.0

Table 3.9 presents the distribution of characters by their medical role. Doctors comprised the largest percentage of the sample (34.9%), with patients (26.9%), patients' family/friends (15.5%), and nurses (12.6%) following. Hospital administrators (4.2%), EMT/paramedics (5.0%) and physician assistants (.8%) appeared infrequently and only two characters were classified as physician assistants. Because of the small number of physician assistants, these characters were excluded from the rest of the analyses.

**Table 3.9 Frequency of Medical Roles**

<b>Medical Role</b>	<b>Frequency <i>N</i></b>	<b>Percent %</b>
Doctor	83	34.9
Nurse	30	12.6
Hospital Administrator	10	4.2
Patient	64	26.9
Patient Family/Friend	37	15.5
EMT/Paramedic	12	5.0
Physician Assistant	2	.8
TOTAL	238	100.0

The majority of doctors were male (62.7%). Table 3.10 shows the distribution of doctors' race by gender. Most doctors were white (79.5%), 12.0% were classified as black, and the remaining 8.5% were Asian or other. Of the doctors classified as Asian and other, the majority was female. Table 3.11 displays the distribution of doctors' ethnicity by gender. The majority of both male and female doctors were of European/Scandinavian descent. All of the Hispanic/Latino doctors were female, and those classified as other were slightly more female (56.2%). Table 3.12 shows the distribution of doctors' sexual orientation by gender. The majority of doctors were straight (95.2%), with all male doctors portrayed as straight. Three female doctors were lesbians (9.7%) and one was bisexual (3.2%).

**Table 3.10 Doctors' Race by Gender**

<i>N</i> = Race	Male 52		Female 31		<i>N</i>
	R%	C%	R%	C%	
White	68.2	86.5	31.8	67.7	66
Black	60.0	11.5	40.0	12.9	10
Asian	16.7	1.9	83.3	16.1	6
Other	0.0	0.0	100.0	3.2	1

R%= row percentages; C%= column percentages.

**Table 3.11 Doctors' Ethnicity by Gender**

<i>N</i> = Ethnicity	Male 52		Female 31		<i>N</i>
	R%	C%	R%	C%	
European/Scandinavian	69.2	86.5	30.8	64.5	65
Hispanic/Latino	0.0	0.0	100.0	6.5	2
Other	43.8	13.5	56.2	29.0	16

R%= row percentages; C%= column percentages.

**Table 3.12 Doctors' Sexual Orientation by Gender**

<i>N</i> = Sexual Orientation	Male 52		Female 31		<i>N</i>
	R%	C%	R%	C%	
Straight	65.8	100.0	34.2	87.1	79
Gay/Lesbian	0.0	0.0	100.0	9.7	3
Bisexual	0.0	0.0	100.0	3.2	1

R%= row percentages; C%= column percentages.

Table 3.13 shows the distribution of race by gender for nurses. The majority of nurses were female (80.0%) and white (73.3%). All of the male nurses were white, one quarter of the female nurses were black, and 8.3% were classified as other. Table 3.14 shows the distribution of nurses' ethnicity by gender. A little over half (56.7%) of all nurses and the majority of female nurses (62.2%) were of European/Scandinavian descent. Half of the male nurses were Hispanic/Latino. A few male and female nurses were of Middle Eastern/Indian descent, and all nurses classified as "other" were female. Table 3.15 displays the distribution of nurses' sexual orientation by gender. The majority of nurses (83.3%) were straight, and all but one female nurse were classified as straight (one female nurse's sexual orientation was unable to be determined). The majority of male nurses, on the other hand, were classified as gay (66.7%).

**Table 3.13 Nurses' Race by Gender**

<i>N</i> = Race	Male 6		Female 24		<i>N</i>
	R%	C%	R%	C%	
White	27.3	100.0	72.7	66.7	22
Black	0.0	0.0	100.0	25.0	6
Other	0.0	0.0	100.0	8.3	2

R%= row percentages; C%= column percentages.

**Table 3.14 Nurses' Ethnicity by Gender**

<i>N</i> = Ethnicity	Male 6		Female 24		<i>N</i>
	R%	C%	R%	C%	
European/Scandinavian	11.8	33.3	88.2	62.5	17
Hispanic/Latino	75.0	50.0	25.0	4.2	4
Middle Eastern/Indian	33.3	16.7	66.7	8.3	3
Other	0.0	0.0	100.0	25.0	6

R%= row percentages; C%= column percentages.

**Table 3.15 Nurses' Sexual Orientation by Gender**

<i>N</i> = Sexual Orientation	Male 6		Female 24		<i>N</i>
	R%	C%	R%	C%	
Straight	8.0	33.3	92.0	95.8	25
Gay/Lesbian	100.0	66.7	0.0	0.0	4
Cannot Code	0.0	0.0	100.0	4.2	1

R%= row percentages; C%= column percentages.

### 3.3 Hypotheses and Research Questions

The following sections detail the results of data analysis for the hypotheses and research questions. The last section details the results of analyses for nurses.

#### 3.3.1 Character Status, Character Type, and Overall Behavior

H1: Doctors are more likely than nurses, hospital administrators, patients, and patients' relatives/friends to be major characters.

This hypothesis was supported,  $\chi^2(5, N= 236) = 24.65, p < .01$ . Table 3.16 indicates the majority of major characters were doctors (41.0%), and patients

(16.7%) and patients' family/friends (7.7%) were significantly underrepresented as major characters (adjusted residuals of -2.5 and -2.4, respectively).

However, the majority of doctors were actually classified as minor characters (61.4%), and the adjusted residuals indicate the distribution of doctors was not significantly different than the distribution expected by chance.

**Table 3.16 Medical Role by Character Status**

<b>N= Medical Role</b>	<b>Major 78</b>		<b>Minor 158</b>		<b>N</b>
	<b>R%</b>	<b>C%</b>	<b>R%</b>	<b>C%</b>	
Doctors	38.6	41.0	61.4	32.3	83
Nurses	60.0*	23.1*	40.0*	7.6*	30
Hospital Administrators	20.0	2.6	80.0	5.1	10
Patients	20.3*	16.7*	79.7*	32.3*	64
Patient Family/Friends	16.2*	7.7*	83.8*	19.6*	37
EMT/Paramedic	58.3	9.0	41.7	3.2	12

Note:  $\chi^2 = 24.65$ ,  $df = 5$ ,  $p < .01$ .

\*= Adj. Residual  $\geq |2.0|$

R%= row percentages; C%= column percentages.

H2: Doctors are more likely to be portrayed as positive than negative.

H3: Doctors are more likely to be portrayed as heroes than as villains.

H5: Patients are more likely to be portrayed as negative than positive.

H6: Hospital administrators are more likely to be portrayed as negative than positive.

H7: Patients' relatives and friends are more likely to be portrayed as negative than positive.

For H2, H3, H5, H6, and H7, two chi-square cross tabulations were conducted. Table 3.17 shows the distribution of medical role by character type and Table 3.18 shows the distribution of medical role by overall behavior. Both tables indicate support for the above hypotheses. For H3, doctors were more likely to be portrayed as the “good”/protagonist/hero type (41.0%) than the “bad”/antagonist/villain type (9.6%). Adjusted residuals indicate that doctors were underrepresented as villains (-2.0). The majority of doctors, however, were classified as neither good nor bad (mixed) (49.9%). For H2, doctors were more likely to engage in positive behavior (47.0%) than neutral/mixed (22.9%) or negative behavior (30.1%).

For H5, patients were more likely to engage in negative behaviors (40.6%) than mixed (32.8%) or positive (26.6%). Adjusted residuals indicate that patients were underrepresented as positive (-3.1). Table 3.17 also indicates that patients were underrepresented as “good”/protagonist/hero types (10.9%, -4.5) and overrepresented as mixed (62.5%, 2.3) and “bad”/antagonist/villain types (26.6%, 2.7).

For H6, hospital administrators were more likely to engage in negative overall behavior (50.0%) than mixed (40.0%) or positive (10.0%). Adjusted residuals indicate that hospital administrators were underrepresented as positive (-2.1). As shown in Table 3.17, hospital administrators were more likely to be mixed characters (60.0%) than negative (30.0%) or positive (10.0%), but this distribution did not significantly contribute to the chi-square result.

There was partial support for H7. Patients’ family/friends’ behavior was represented as equally positive and negative, but patients’ family/friends were overrepresented as the “bad”/antagonist/villain type (adjusted residual= 2.0).

**Table 3.17 Medical Role by Character Type**

N= Medical Role	Good 79		Mixed 119		Bad 38		N
	R%	C%	R%	C%	R%	C%	
Doctors	41.0	43.0	49.4	34.5	9.6*	21.1*	83
Nurses	73.3*	27.8*	26.7*	6.7*	0.0*	0.0*	30
Hospital Administrators	10.0	1.3	60.0	5.0	30.0	7.9	10
Patients	10.9*	8.9*	62.5*	33.6*	26.6*	44.7*	64
Patient Family/Friends	24.3	11.4	48.6	15.1	27.0*	26.3*	37
EMT/Paramedics	50.0	7.6	50.0	7.6	0.0	0.0	12

Note:  $\chi^2 = 51.530$ ,  $df = 10$ ,  $p < .01$ .

\*= Adj. Residual  $\geq |2.0|$

R%= row percentages; C%= column percentages.

**Table 3.18 Medical Role by Overall Behavior**

N= Medical Role	Positive 101		Neutral/Mixed 60		Negative 75		N
	R%	C%	R%	C%	R%	C%	
Doctors	47.0	38.6	22.9	31.7	30.1	33.3	83
Nurses	73.3*	21.8*	20.0	10.0	6.7*	2.7*	30
Hospital Administrators	10.0*	1.0*	40.0	6.7	50.0	6.7	10
Patients	26.6*	16.8*	32.8	35.0	40.6	34.7	64
Patient Family/Friends	40.5	14.9	18.9	11.7	40.5	20.0	37
EMT/Paramedics	58.3	6.9	25.0	5.0	16.7	2.7	12

Note:  $\chi^2 = 27.84$ ,  $df = 10$ ,  $p < .01$ .

\*= Adj. Residual  $\geq |2.0|$

R%= row percentages; C%= column percentages.

H8: Mentally ill characters are more likely than characters with a physical illness to be portrayed as negative.

As only two characters were identified as mentally ill, this hypothesis could not be tested.

### 3.3.2 Destructive and “Bad” Behaviors

RQ2: Which medically-related characters (doctors, nurses, patients, hospital administrators, and patients’ relatives/friends) will engage in destructive and “bad” behaviors, such as smoking, drug abuse, excessive drinking, violence, and criminal behavior? What behaviors are seen most frequently?

Table 3.19 shows the frequency of “bad” or destructive behaviors. The most frequent problematic behavior was drinking; almost one in five characters (19.5%) consumed alcohol. Most of the drinking was recreational; only 3.4% of the characters were alcoholics. The second most frequent problematic behavior was drug use; 11% of characters consumed drugs and 3.4% were classified as drug addicts. Violence and criminal acts were not common; only 8.8% of characters committed violence (only .8% committed fatal violence) and 9.7% committed a criminal act. None of the characters smoked.

**Table 3.19 Frequency of Destructive/ “Bad” Characters**

<b>Behavior</b>	<b>% of Characters Engaged in Behavior</b>	<b><i>N</i></b>
Drinking	19.5	46
Drug Use	11.0	26
Crime	9.7	23
Violence	8.8	21
Smoking	0.0	0

A series of cross tabulations were conducted to investigate which characters engaged in problematic behaviors. For alcohol, 85.7% of alcoholics were patients and 14.3% were hospital administrators. For drug use, half of the recreational drug users were patients and the other half were their family and friends. Drug addicts

also included patients (62.5%), nurses (25.0%), and doctors (12.5%). The only characters who killed were patients. Patients were almost half (47.5%) of the characters who hurt others (committed non-fatal violence). Patient family/friends made up 21.1%, and doctors, nurses, and EMT/paramedics each had 10.5%. Over half of those who committed criminal acts (52.2%) were patients and 30.4% were their family and friends.

### **3.3.3 Medical Professionals' Modes and Attitudes**

H4: Doctors will be shown dealing with their own personal problems more than curing or caring for patients.

This hypothesis was partially supported. Medical professionals were coded for their different “modes”, or the focus of their actions during an episode. A character could have more than one mode during a program. For each mode, scores could range from 0 (character not shown in that mode) to 2 (mode was a major focus of character’s storyline). The five modes, adapted from Makoul and Peer (2004) study, were:

“Caring (primarily concerned for the patient’s feelings, comfort, and family), curing (focused on the patient’s physical condition and treatment), administrative (chief role was as a manager of resources, including other health care workers), business (focused on budget concerns, insurance problems, or other monetary issues), education (primarily involved in role as a teacher or learner), and personal (dealt with issues in personal life apart from role as a caregiver)” (pp. 250-251).

A series of paired-samples t-tests were conducted comparing the five modes, and the results can be seen in Tables 3.20-3.21. As hypothesized, doctors were

shown engaging in the personal mode significantly more than a caring mode,  $t(59) = 7.39, p < .01$ . Contrary to what was hypothesized, doctors were in a curing mode more than a personal mode, but this difference was not statistically significant,  $t(59) = 1.08, p = .26$ . The curing, personal, and caring modes were seen significantly more than any of the other modes.

**Table 3.20 Frequency of Doctors' Modes**

<b>Mode</b>	<b>Mean</b>
Caring	.37
Curing	1.48
Admin	.05
Business	.02
Education	.13
Personal	1.32

Note: Scores range from 0 (character not shown in that mode) to 2 (mode was a major focus of character's storyline).

**Table 3.21 Comparisons of Frequencies of Doctors' Modes**

	<b>Caring</b>	<b>Curing</b>	<b>Admin</b>	<b>Business</b>	<b>Educatio n</b>	<b>Personal</b>
<b>Caring</b>						
<b>Curing</b>	t=11.71** df=59					
<b>Admin</b>	t=-4.11** df=59	t=- 17.89** df=59				
<b>Business</b>	t=-4.96** df=59	t=- 20.06** df=59	t=-1.49 df=59			
<b>Education</b>	t=-2.91** df=59	t=- 14.75** df=59	t=1.30 df=59	t=2.18* df=59		
<b>Personal</b>	t=7.63** df=59	t=-1.08 df=59	t=12.27** df=59	t=13.55** df=59	t=11.58** df=59	

Note: \* =  $p < .05$ ; \*\* =  $p < .01$

H14: The medical staff's attitude toward patients is more likely to be negative than positive.

This hypothesis was not supported. The majority of medical professionals did not express an attitude about patients. Although negative attitudes were more likely than positive attitudes to be expressed, the chi-square goodness of fit test was not significant,  $\chi^2 (2, N= 76) = 4.61, p = .10$ .

### 3.3.4 Patients: Demographics, Illnesses, Treatment, and Outcomes

RQ3: What demographic groups are typically shown as ill on television?

To investigate the demographics of the patients, a series of cross tabulations of patients' demographic variables were conducted. Table 3.22 shows the distribution of patients' gender and race. The majority of patients were male (62.5%) and white (85.9%). About one in ten (10.9%) patients was black, 3.1% were Asian, and the distribution of males and females between the races was roughly equal. Table 3.23 shows the distribution of patients' gender and sexual orientation. Patients were overwhelmingly straight; 95.3% of patients were straight, 1.6% were gay, and 8.3% were bisexual. All of the bisexuals were female. Table 3.24 shows the distribution of patients' gender and age. The majority of patients were between the ages of 11 and 50 (81.3%), with the most in the 41-50 age range (26.6%). The distribution of males and females by age was roughly equal.

**Table 3.22 Patient's Race by Gender**

<i>N</i> = Race	Male 40		Female 24		<i>N</i>
	R%	C%	R%	C%	
White	63.6	87.5	36.4	83.3	55
Black	57.1	10.0	42.9	12.5	7
Asian	50.0	2.5	50.0	4.2	2

Note: R%= row percentages; C%= column percentages.

**Table 3.23 Patients' Sexual Orientation by Gender**

<i>N</i> = Sexual Orientation	Male 40		Female 24		<i>N</i>
	R%	C%	R%	C%	
Straight	63.9	97.5	36.1	91.7	61
Gay/Lesbian	100.0	2.5	0.0	0.0	1
Bisexual	0.0	0.0	100.0	8.3	2

Note: R%= row percentages; C%= column percentages.

**Table 3.24 Patients' Age by Gender**

<i>N</i> = Age	Male 40		Female 24		<i>N</i>
	R%	C%	R%	C%	
0-10	100.0	5.0	0.0	0.0	2
11-20	57.1	20.0	42.9	25.0	14
21-30	64.3	22.5	35.7	20.8	14
31-40	87.5	15.0	14.3	4.2	7
41-50	58.8	25.0	41.2	29.2	17
51-60	66.7	5.0	33.3	4.2	3
61-70	0.0	0.0	100.0		2
71-80	60.0	7.5	40.0		5

Note: R%= row percentages; C%= column percentages.

H9a: There will be more trauma-related injuries than common illnesses such as heart disease, cancer, diabetes and cold/flu.

H9b: There will be more rare illnesses than common illnesses such as heart disease, cancer, diabetes and cold/flu.

These hypotheses were supported,  $\chi^2 (5, N= 69) = 80.13, p < .01$ . As Table 3.25 shows, the most common ailments were trauma-related injuries (46.4%) and other rare illness (36.2%). Residuals indicate these two types of ailments were overrepresented (20.5 and 13.5). All of the other illnesses were underrepresented: cancer (10.1%, -4.5), heart disease (5.8%, -7.5), and diabetes (1.5%, -10.5). No character had a cold or the flu. Table 3.26 shows the list of other medical conditions; the most common were meningitis, pregnancy, drug-related ailments, and rejected/infected transplants.

**Table 3.25 Chi-Square Goodness of Fit- Illnesses**

<b>Illness</b>	<b>Frequency <i>N</i></b>	<b>Percent %</b>	<b>Residual</b>
Cancer	7	10.1	-4.5
Heart Disease	4	5.8	-7.5
Diabetes	1	1.5	-10.5
Cold/Flu	0	0.0	-11.5
Injury	32	46.4	20.5
Other Illness	25	36.2	13.5
TOTAL	69	100.0	

$\chi^2 = 80.13, df = 5, p < .01$

**Table 3.26 List of Other Medical Conditions**

<b>Illness</b>	<b>Frequency <i>N</i></b>
Meningitis	3
Pregnancy	3
Drug Overdose	1
Drug Addiction	1
Drug Reaction- Causes Photosensitivity	1
Infected Arm Transplant	1
Infected/Rejected Hand Transplant	1
Alcoholism	1
Autism	1
Autoimmune Disease	1
Blood Vessel Rupture/Ringing in Ear	1
Carbon Monoxide Poisoning	1
Chronic Obstructive Pulmonary Disease	1
Erectile Dysfunction	1
Hiccups	1
HIV/Liver Failure	1
Sarcoidosis	1
Stomach Ulcers	1
Stroke	1
Tumor	1
Unknown	1
TOTAL	25

RQ4: Are patients typically shown as causing their condition through their actions or lifestyle?

A chi-square goodness of fit test was conducted and results are shown in Table 3.27. Results indicate that most patients (57.8%) were not personally responsible for their illness.

**Table 3.27 Chi-Square Goodness of Fit Test- Responsibility for Illness**

<b>Value Label</b>	<b>Frequency <i>N</i></b>	<b>Percent %</b>	<b>Residual</b>
Not responsible	37	57.8	15.7
Responsible	18	28.1	-3.3
Unclear/unknown	9	14.1	-12.3
TOTAL	64	100.0	

$\chi^2 = 19.16, df = 2, p < .01$

H10: The majority of treatment will take place in a hospital, particularly the ER.

This hypothesis was partially supported. The ER treatment location variable was unreliable and excluded from the analysis. For every other location (hospital, primary care office, specialist's office, clinic, home, and other), scores ranged from 0 (no treatment) to 1 (treatment received). A series of paired-samples t-tests were conducted to compare treatment locations' frequencies, and results are shown in Tables 3.28-3.29. Treatment occurred at the hospital significantly more than all other locations. The second most common treatment location was the "other" category and it was shown significantly more than the primary care, specialist, clinic, or home. No patient received treatment at a primary care office.

**Table 3.28 Frequency of Treatment Locations**

<b>Location</b>	<b>Mean Score</b>
Hospital	.53
Primary Care	.00
Specialist's Office	.03
Clinic	.02
Home	.08
Other	.22

Note: Scores range from 0 (no treatment) to 1 (received treatment).

**Table 3.29 Comparisons of Frequencies of Treatment Locations**

	<b>Hospital</b>	<b>Primary Care</b>	<b>Specialist's Office</b>	<b>Clinic</b>	<b>Home</b>	<b>Other</b>
<b>Hospital</b>						
<b>Primary Care</b>	t=-8.45** df=63					
<b>Specialist's Office</b>	t=-7.10** df=63	t=1.43 df=63				
<b>Clinic</b>	t=-8.19** df=63	t=1.00 df=63	t=-.57 df=63			
<b>Home</b>	t=-5.89** df=63	t=2.31** df=63	t=1.14 df=63	t =1.66 df=63		
<b>Other</b>	t=-3.07** df=63	t=4.20** df=63	t=3.21** df=63	t=3.67** df=63	t=2.12* df=63	

Note: \* = p < .05; \*\* = p < .01

RQ5: What is the typical outcome of medical treatment?

A chi-square goodness of fit test was conducted and results are shown in Table 3.30. The majority of patients had their health improve (54.7%) and residuals

indicate this result was overrepresented (22.2), 17.2% died, 6.2% had their health remain the same, 1.6% had their health decline but did not die, and the medical outcome was unresolved or unclear for 20.3%.

**Table 3.30 Chi-Square Goodness of Fit Test- Outcome of Treatment**

Value Label	Frequency <i>N</i>	Percent %	Residual
Improves	35	54.7	22.2
Remains the same	4	6.2	-8.8
Declines (non-fatal)	1	1.6	-11.8
Dies	11	17.2	-1.8
Unresolved/unclear	13	20.3	.2
TOTAL	64	100.0	

$\chi^2 = 55.69, df = 4, p < .01$

### 3.3.5 Patient Participation

H12: Patients will be passive participants in their health care decisions when interacting with doctors.

This hypothesis was not supported. Patient participation is the extent of involvement a patient shows in their health care decisions. There are five different levels of patient participation: unconscious, meaning no participation due to a patient being unconscious or in a state of emergency; child, meaning no participation due to the patient being a child; passive participation, meaning the patient was physically and mentally able to participate but does not; moderate participation, meaning the patient participates to a limited extent; or active participation, meaning the patient participates. For each character, each level of patient participation was scored from 0

(no patient participation at this level) to 3 (most patient participation occurred at this level).

Tables 3.31-3.32 show the results a series of paired-samples t-tests -square for the different levels of patient participation with doctors. Passive participation was the highest level of participation (mean score of .97), but it was only significantly different than the level of child participation at  $\alpha = .05$ ,  $t(60) = 2.55$ ,  $p < .05$ .

**Table 3.31 Frequency of Patient Participation with Doctors**

Level of Patient Participation	Mean Score
Unconscious	.70
Child	.38
Passive	.97
Moderate	.64
Active	.75

Note: Scores range from 0 (no patient participation at this level) to 3 (most patient participation occurred at this level).

**Table 3.32 Comparison of Patient Participation Levels with Doctors**

	Unconscious	Child	Passive	Moderate	Active
Unconscious					
Child	t=-1.65 df=60				
Passive	t=1.05 df=60	t=2.55* df=60			
Moderate	t=-.31 df=60	t=1.24 df=60	t=-1.32 df=60		
Active	t=.23 df=60	t=1.73 df=60	t=-.82 df=60	t=.53 df=60	

Note: \* =  $p < .05$ ; \*\* =  $p < .01$

### 3.3.6 Interactions: Frequency

H11: Doctors will interact with other doctors more than with patients.

This hypothesis was supported. Coders indicated how often doctors interacted with other doctors, nurses, patients, patients' family/friends, hospital administrators, other health care workers, and other non-medical characters. Scores ranged from 0 (no interactions) to 3 (most interactions). Tables 3.33-3.34 show the results of a series of paired-samples t-tests comparing how often doctors interacted with different characters. Doctors interacted with other doctors significantly more than any other type of character, including patients.

**Table 3.33 Frequency of Doctors' Interactions with Different Characters**

<b>Interact With</b>	<b>Mean</b>
Doctors	2.23
Nurses	.79
Patients	1.41
Patient Family/Friends	.90
Hospital Admin.	.46
Other Health Care Workers	.15
Others (Non-Healthcare)	.30

Note: Scores range from 0 (no interactions) to 3 (most interactions).

**Table 3.34 Comparison of Frequencies of Doctors' Interactions with Different Characters**

	<b>Doctors</b>	<b>Nurses</b>	<b>Patients</b>	<b>Patients' Fam/Fri</b>	<b>Hosp. Admin</b>	<b>Other Health</b>	<b>Other</b>
<b>Doctors</b>							
<b>Nurses</b>	t=-5.44** df=60						
<b>Patients</b>	t=-4.89** df=60	t=3.18** df=60					
<b>Patients' Fam/Fri</b>	t=-6.28** df=60	t=.60 df=60	t=-2.30** df=60				
<b>Hosp. Admin.</b>	t=-11.92** df=60	t=-1.67 df=60	t=-7.04** df=60	t=-3.22** df=60			
<b>Other Health</b>	t=-12.81** df=60	t=-3.62** df=60	t=-11.81 ** df=60	t=-6.13** df=60	t=-2.87** df=60		
<b>Other</b>	t=-11.96** df=60	t=-2.73** df=60	t=-8.05** df=60	t=-4.31** df=60	t=-1.30 df=60	t=1.38 df=60	

Note: \* = p < .05; \*\* = p < .01

### 3.3.7 Interactions: Topics

RQ9: What do medical professionals and patients typically discuss during interactions?

Tables 3.35-3.36 show the results of a series of paired-samples t-tests of the frequencies of different interaction topics. For each topic, scores ranged from 0 (no interactions) to 3 (most interactions). The most common topic was treatment (1.84); treatment was discussed significantly more than any other topic. The next most common topic was symptoms (1.40), which was discussed significantly more than all other topics except treatment. Following treatment and symptoms, the next most common topics were other interpersonal topics (.86), causes (.73), patient problems (.69), and small talk (.31). Medical history (.10) and medical professionals' personal problems (.07) were the least common topics discussed.

**Table 3.35 Frequency of Interaction Topics**

<b>Topic</b>	<b>Mean Score</b>
Symptoms	1.40
Med History	.10
Causes	.73
Treatment	1.84
Med Prob.	.07
Patient Prob.	.69
Small Talk	.31
Other Inter.	.86

Note: Scores range from 0 (no interactions) to 3 (most interactions).

**Table 3.36 Comparison of Frequencies of Interaction Topics**

	<b>Symptom</b>	<b>Med History</b>	<b>Causes</b>	<b>Treatment</b>	<b>Med Prob.</b>	<b>Patient Prob.</b>	<b>Small Talk</b>	<b>Other Inter.</b>
<b>Symptom</b>								
<b>Med History</b>	t=-15.92** df=194							
<b>Causes</b>	T=-6.97** df=194	t=9.01** df=194						
<b>Treatment</b>	t=4.71** df=194	t=20.5** df=194	t=10.83** df=194					
<b>Med Prob.</b>	t=-15.14** df=194	t=-.762 df=194	t=-8.98** df=194	t=-20.33** df=194				
<b>Patient Prob.</b>	t=-6.85** df=194	t=8.67** df=194	t=-.522 df=194	t=-11.40** df=194	t=8.98** df=194			
<b>Small Talk</b>	t=-10.44** df=194	t=3.73** df=194	t=-4.71** df=194	t=-14.37** df=194	t=4.35** df=194	t=-4.60** df=194		
<b>Other Inter.</b>	t=-4.69** df=194	t=10.59** df=194	t=1.37 df=194	t=-8.73** df=194	t=10.85** df=194	t=2.01** df=194	t=6.78** df=194	

Note: \* = p < .05; \*\* = p < .01

### 3.3.8 Interactions: Communication Style

H13: Doctors are more likely to have a dominant communication style than an affiliative communication style when interacting with patients.

This hypothesis was supported. Tables 3.37-3.38 show the results of a series of paired-samples t-tests comparing the frequencies of doctors' communication styles. Scores for each communication style ranged from 0 (no interactions with this communication style) to 3 (most interactions with this communication style).

Dominant communication styles were the most common (1.72) and used significantly more than both affiliative and mixed/neutral communication styles.

**Table 3.37 Frequency of Doctors' Communication Style**

Communication Style	Mean Score
Dominant	1.72
Affiliative	.97
Mixed/Neutral	.95

Note: Scores range from 0 (no interactions with communication style) to 3 (most interactions with communication style).

**Table 3.38 Comparisons of Frequencies of Doctors' Communication Style**

	Dominant	Affiliative	Mixed/Neutral
Dominant			
Affiliative	t=-2.52** df=60		
Mixed/Neutral	t=-3.15** df=60	t=-.07 df=60	

Note: \* = p < .05; \*\* = p < .01

RQ10: Does communication style relate to interaction topic?

For each interaction topic, characters' communication style was rated ranging from 1 (mostly dominant) to 3 (mostly affiliative). Tables 3.39-3.40 show the results of a series of paired-samples t-tests comparing the communication styles of each interaction type. Small talk was significantly more affiliative than discussions about symptoms, causes, and treatment. Additionally, small talk was also significantly more affiliative than interactions about patients' personal problems and other interpersonal comments. Other interpersonal comments were significantly more affiliative than discussions about causes and treatment. There were no other significant differences between topics.

**Table 3.39 Frequency of Interaction Topics' Communication Style**

<b>Topic</b>	<b>Mean</b>
Symptom	1.72
Med History	2.06
Causes	1.47
Treatment	1.66
Med Prob.	2.00
Patient Prob.	1.63
Small Talk	2.60
Other Inter.	2.04

Note: Scores range from 1 (mostly dominant) to 3 (mostly affiliative).

**Table 3.40 Comparisons of Interaction Topics' Communication Styles**

	Symptom	Med History	Causes	Treatment	Med Prob.	Patient Prob.	Small Talk	Other Inter.
<b>Symptom</b>								
<b>Med History</b>	t=.56 df=14							
<b>Causes</b>	t=-2.00* df=75	t=0.00 df=9						
<b>Treatment</b>	t=-1.92 df=130	t=-1.43 df=15	t=.93 df=78					
<b>Med Prob.</b>	t=0.00 df=2	X	t=.54 df=4	t=.42 df=7				
<b>Patient Prob.</b>	t=-.923 df=67	t=-1.00 df=9	t=0.00 df=56	t=.44 df=76	X			
<b>Small Talk</b>	t=3.58** df=27	t=.79 df=5	t=3.29** df=19	t=5.09** df=27	X	t=3.89** df=23		
<b>Other Inter.</b>	t=2.54* df=81	t=-1.73 df=11	t=3.30** df=56	t=3.26** df=89	t=.42 df=694	t=1.69 df=63	t=-3.15** df=31	

Note: \* =  $p < .05$ ; \*\* =  $p < .01$ ; x indicates test could not be conducted.

### 3.3.9 Nurses

RQ1: How nurses are portrayed in terms of character status, character type, overall behavior, and modes?

For character status, nurses were overrepresented as major characters (adjusted residual of 3.4). As shown in Table 3.16, nurses made up 23.1% of major characters and 60.0% of nurses were major characters. Less than 10% of the minor characters were nurses.

In terms of character type and overall behavior, nurses are very positive, good characters. As shown in Table 3.17, nurses were overrepresented as “good”/protagonist/hero types (73.3%, 5.0) and underrepresented as mixed characters (26.7%, -2.8). There were no nurses classified as the “bad”/antagonist/villain type, and they were the only medical professionals besides EMT/paramedics with no “bad” characters. Table 3.18 indicates that nurses were overrepresented as having overall positive behavior (73.3%, 3.6) and underrepresented as engaging in overall negative behavior (6.7%, -3.2).

Tables 3.41-3.42 show the results of a series of paired-samples t-tests comparing the frequencies of nurses’ modes. As with doctors, nurses were coded for their modes, and scores ranged from 0 (character not shown in that mode) to 2 (mode was a major focus of character’s storyline). In terms of modes, nurses were similar to doctors. Nurses’ were significantly more likely to be shown in a curing mode (focused on the patient’s physical condition and treatment) or a personal mode (dealt with issues in personal life apart from role as a caregiver) than any other mode. Caring (primarily concerned for the patient’s feelings, comfort, and family) was shown significantly more often than administrative (chief role was as a manager of resources,

including other health care workers), business (focused on budget concerns, insurance problems, or other monetary issues), or education (primarily involved in role as a teacher or learner).

**Table 3.41 Frequency of Nurses' Modes**

Mode	Mean Score
Caring	.82
Curing	1.14
Administrative	.14
Business	.04
Education	.25
Personal	1.39

Note: Scores range from 0 (not shown in mode) to 2 (mode major focus of storyline).

**Table 3.42 Comparisons of the Frequencies of Nurses' Modes**

	Caring	Curing	Admin	Business	Educatio n	Personal
Caring						
Curing	t=1.97 df=27					
Admin	t=-3.52** df=27	t=-7.35** df=27				
Business	t=-4.99** df=27	t=-10.33** df=27	t=-1.36 df=27			
Educatio n	t=-3.62** df=27	t=-8.33** df=27	t=.83 df=27	t=2.27* df=27		
Personal	t=2.52* df=27	t=1.43 df=27	t=7.46** df=27	t=9.21** df=27	t=7.53** df=27	

Note: \* =  $p < .05$ ; \*\* =  $p < .01$

RQ7: Will patients be active participants in their health care decisions when interacting with nurses?

Patient participation, the extent of involvement a patient shows in their health care treatment decisions, was coded in the same manner for nurses as for doctors. Each level of patient participation was scored on a range of 0 (no patient participation at this level) to 3 (most patient participation occurred at this level). Tables 3.43-3.44 show the results of a series of paired-samples t-tests comparing the frequency of the different levels of patient participation with nurses. Passive participation, when the patient is physically and mentally able to participate but does not, occurred the most (.86), but it was only significantly more common than child participation at  $\alpha = .05$ ,  $t(27) = 1.85$ ,  $p < .05$ .

**Table 3.43 Frequency of Patient Participation Levels with Nurses**

<b>Level of Patient Participation</b>	<b>Mean</b>
Unconscious	.81
Child	.38
Passive	.86
Moderate	.68
Active	.75

Note: Scores ranged from 0 (no patient participation at this level) to 3 (most patient participation at this level).

**Table 3.44 Comparisons of Frequencies of Patient Participation Levels with Nurses**

	<b>Unconscious</b>	<b>Child</b>	<b>Passive</b>	<b>Moderate</b>	<b>Active</b>
<b>Unconscious</b>					
<b>Child</b>	t=-1.72 df=27				
<b>Passive</b>	t=-.10 df=27	t=1.85* df=27			
<b>Moderate</b>	t=-.62 df=27	t=1.06 df=27	t=-.51 df=27		
<b>Active</b>	t=-.41 df=27	t=1.36 df=27	t=-.31 df=27	t=.21 df=27	

Note: \* =  $p < .05$ ; \*\* =  $p < .01$

RQ6: How often will nurses interact with patients?

Tables 3.45-3.46 show the results of a series of paired-samples t-tests comparing the frequencies of nurses' interactions with different types of characters. Nurses were significantly more likely to interact with other nurses than any other character. Except for other nurses, nurses interacted with patients significantly more than any other characters. Nurses interacted more with doctors than hospital administrators and other health care workers.

**Table 3.45 Frequency of Nurses' Interactions with Different Types of Characters**

<b>Interact With</b>	<b>Mean</b>
Doctors	1.18
Nurses	2.50
Patients	1.64
Patient Family/Friends	1.00
Hospital Admin.	.29
Other Health Care Workers	.18
Others (Non-Healthcare)	.82

Note: Scores range from 0 (no interactions) to 3 (most interactions).

**Table 3.46 Comparisons of Frequencies of Nurses' Interactions with Different Types of Characters**

	<b>Doctors</b>	<b>Nurses</b>	<b>Patients</b>	<b>Patients' Fam/Fri</b>	<b>Hosp. Admin</b>	<b>Other Health</b>	<b>Other</b>
<b>Doctors</b>							
<b>Nurses</b>	t=6.22** df=27						
<b>Patients</b>	t=2.29* df=27	t=-3.42** df=27					
<b>Patients' Fam/Fri</b>	t=-.87 df=27	t=-6.15** df=27	t=-2.59* df=27				
<b>Hosp. Admin.</b>	t=-4.75** df=27	t=-10.05** df=27	t=-5.60** df=27	t=-3.60** df=27			
<b>Other Health</b>	t=-7.35** df=27	t=-12.50** df=27	t=-8.06** df=27	t=-5.31** df=27	t=-.72 df=27		
<b>Other</b>	t=-1.99 df=27	t=-6.80** df=27	t=-3.13** df=27	t=-.80 df=27	t=2.65** df=27	t=4.36 df=27	

Note: \* =  $p < .05$ ; \*\* =  $p < .01$

RQ8: Will nurses have dominant communication styles when interacting with patients or affiliative communication styles?

Tables 3.47-3.48 show the results of a series of paired-samples t-tests comparing the frequencies of nurses' communication styles. Scores for each communication style ranged from 0 (no interactions with this communication style) to 3 (most interactions with this communication style). There was no significant difference between the frequencies of affiliative and dominant communication styles,  $t(27) = 1.78, p = .86$ . Nurses used both communication styles significantly more than mixed/neutral communication.

**Table 3.47 Frequency of Nurses' Communication Styles**

Communication Style	Mean
Dominant	1.64
Affiliative	1.72
Mixed/Neutral	.79

Note: Scores range from 0 (no interactions) to 3 (most interactions).

**Table 3.48 Comparisons of the Frequencies of Nurses' Communication Styles**

	Dominant	Affiliative	Mixed/Neutral
Dominant			
Affiliative	$t=.178$ $df=27$		
Mixed/Neutral	$t=-2.91^{**}$ $df=27$	$t=-3.36^{**}$ $df=27$	

Note: \* =  $p < .05$ ; \*\* =  $p < .01$

## Chapter 4

### SUMMARY AND DISCUSSION

#### 4.1 Summary

This study examined entertainment television's depiction of medical professionals, patients, and the interactions between them. Coding schemes were developed to analyze the characterization of medical professionals and patients as well as health care interactions. Regarding characterization, this study examined demographics, if characters were typically portrayed as "good" or "bad" and if they engaged in positive or negative behaviors. For patients, this study was also concerned with their illnesses, where they received treatment, the outcome of their treatment, and if they were portrayed as causing their illnesses through their lifestyle choices or actions. For interactions, this study focused on four different elements: (a) with whom these characters interacted, (b) their communication styles during health care interactions, (c) the topics of health care interactions, and (d) the patients' level of participation during health care decisions. Results indicated that doctors and nurses are shown as more important and more positive than other health care workers and patients on television. Results also indicated that most patients are "bad" people suffering from traumatic injuries or rare illnesses, but they normally survive these ailments. In terms of interactions, results found that doctors typically dominate health care interactions and patients are uninvolved with their health care decisions.

These results indicate that viewers could develop some potentially damaging conceptions about the medical world from television. This chapter discusses the findings and the possible implications of these depictions in terms of cultivation and social cognitive theory. This chapter also provides an overview of the study's limitations and future research directions.

## **4.2 Findings and Implications**

The following sections provide a general description of the characters, the results of data analysis, and possible implications. These implications are purely speculative; content analysis is a study of media content, not of media effects. As such, this discussion suggests possible effects of these depictions based on previous research and cultivation and social cognitive theory.

### **4.2.1 Description of the Characters**

There were more males than females in this sample. The majority of characters were white and of European/Scandinavian descent. They were also mostly young (21-50), middle class, and straight.

For medical roles, the majority of characters were doctors. Patients were the second largest group, making up over a quarter of the sample, and were followed by their family/friends and nurses. The last 10.0% of the sample was comprised of hospital administrators, EMT/paramedics, and physician's assistants.

### **4.2.2 Character Status**

The first hypothesis conjectured that doctors were more likely than other characters to be classified as major characters and was supported. Doctors made up the majority of major characters while patients and patients' family/friends were

underrepresented as major characters. Patients and their family/friends made up over half of the minor characters and less than a quarter of the major characters, despite composing almost half of the entire sample of characters. This result supports Turow's (1989) finding that medical shows shifted from a patient-centered to a doctor-centered focus after the 1970s. This shift is important because, as major characters are essential to the storyline of the show, television gives the impression that doctors are the most important players in medical situations. With most patients and their family/friends regulated to minor roles, viewers get the sense that patients and their family/friends do not matter much in the medical world.

In addition to the focus on doctors, television shows have begun to focus on nurses. Although patients and their family/friends made up a larger percentage of the sample than nurses (which could be due to coding criteria), nurses made up the larger percentage of major characters. Nurses were overrepresented as major characters and only made up 10.0% of all the minor characters in the sample. This is a significant change from previous decades where past research (Meier, 1998; Signorielli, 1993) found that nurses were largely ignored on television. As this invisibility has led the public to somewhat discredit nursing as a discipline (Gordon & Buresh, 2001), this represents a positive shift for the nursing profession. So although there are still not as many nurses on television as doctors, nurses are becoming more important on television and could possibly be given more respect by viewers in the real world.

#### **4.2.3 “Good” vs. “Bad”**

Many of the hypotheses and research questions were concerned with how medical professionals, patients, and their family/friends were portrayed. Depending on

the valence of these portrayals, viewers could develop harmful perceptions about the type of people who provide health care or the type of people who need it.

H2 posited that doctors were more likely to be portrayed as good than bad, and H3 predicted that doctors were more likely to engage in positive than negative behavior. Both these hypotheses were supported. More doctors were portrayed as engaging in positive behavior than negative behavior, and more doctors were classified as “good” heroes than “bad” villains. In fact, doctors were underrepresented as villains. Although more doctors were classified as heroes than villains, the majority of doctors were actually classified as mixed types. These findings echo the conclusions of other researchers (e.g., Chory-Assad & Tamborini 2001; Turow & Gans-Boriskin, 2007) that doctors are still largely positive characters but have become more negative in recent decades. Doctors are no longer overwhelmingly positive characters in prime time television, as had been found in previous decades (e.g., Gerbner et al., 1982). As television’s glowing image of doctors erodes, viewers’ confidence in their physicians might also fade. When doctors were shown in a largely positive light on television, Gerbner et al. (1982) found that heavy television viewing was positively associated with high confidence in doctors. But after the shift to more negative depictions, Chory-Assad and Tamborini (2003) found that increased exposure to prime time doctor programs was positively associated with perceptions of doctors being uncaring, cold, unfriendly, nervous, tense, and anxious. Thus, as cultivation theory suggests, viewers’ perceptions of the world can match television’s representations of it. So although these portrayals might not be completely negative, they still could be leading to negative perceptions of doctors and lower confidence.

While doctors on television have become less positive over time, nurses have become significantly more positive. Almost three out of four nurses were classified as heroes, and none of the nurses were classified as villains. Nurses were also overrepresented as engaging in positive behavior. This has completely reversed from previous research that found that nurses were shown as less positive than doctors (Gerbner et al., 1982). So although viewers' confidence in doctors might be fading, viewers' confidence in nurses might be growing. Again, this represents a positive shift for the nursing discipline. It could also have immediate benefits in the real world; nurse practitioners are currently replacing many primary care doctors in the United States (Brewington, 2009), so increased confidence in nursing and positive perceptions of nurses could have positive benefits for society and health care.

These depictions could have an impact in the real world, because both cultivation and social cognitive theory reason that television can create mental models or schemas that impact viewers' worldviews and behaviors (Bandura, 2002; Schrum, 2002). Schema can be thought of as related concepts and cognitive representations that are stored in the mind. For cultivation theory, television can create certain schemas and increase their accessibility in the mind, much like a priming effect (Schrum, 2002). For social cognitive theory, television creates mental models of behaviors. Bandura (2002) describes the different cognitive capabilities that humans use to guide their behavior; the symbolizing capability allows humans to create mental models of actions to guide their future behaviors. Based on these models, humans will be motivated or unmotivated to perform the behavior. These depictions of doctors and nurses on television can contribute to viewers' health care schema. For example, these medical professionals should be more accessible in the mind of viewers than others, as

doctors and nurses are the most important characters on television. The image of doctors as more negative than nurses can also add to viewers' health care schema. This view can become highly accessible in viewers' minds, and viewers might be less confident in their doctors' opinions but trust their nurses.

In contrast to nurses, hospital administrators are still cast in a negative light. H6 posited that hospital administrators were more likely to be portrayed as negative than positive, and results support this assertion. Hospital administrators were underrepresented as engaging in positive behavior (only 10% did) and most were classified as mixed (60%) or "bad" characters (30%). These findings support previous research that found hospital administrators are negative characters who often act as villains for doctors to heroically defy (Jacobs, 2003, Vandekieft, 2004). Although hospital administrators are unlikely to be highly accessible in viewers' minds as they are usually minor characters, from their negative portrayals, viewers could develop biased perceptions of hospital administrators and their role in health care.

Of all the characters, patients and their family and friends are cast in the most negative light. H5 and H6 posited that patients and their family/friends would be more negative than positive, and these hypotheses were supported. Patients were underrepresented as engaging in positive behavior (only a quarter did) and overrepresented as villains and mixed characters. In fact, patients and their family/friends comprised almost three quarters of all the villains in the sample. Patients were also underrepresented as "good" characters, with only 10% shown as heroes. These findings support previous research that found that patients are often problems or annoyances (Jacobs, 2003), trouble or troubled (Makoul & Peer, 2004),

and their relatives and friends are often portrayed as nuisances to medical professionals (Turow & Gans, 2002).

In addition to being cast in a negative light, patients are more likely than other characters to engage in destructive behaviors. Overall, not many characters engaged in bad behaviors. While almost one in five drank alcohol, drug use, crime, and violence were uncommon and no characters smoked. Those who did engage in these behaviors, however, were almost always patients. Over half of the alcoholics were patients and all of the recreational drug users were patients or their family/friends. Additionally, patients made up over half of the drug addicts. The only killers were patients, and they also committed almost half of the non-fatal violence. Patients and their family and friends also committed over 80% of the criminal acts. With most patients being classified as villains and engaging in negative or socially discouraged behaviors, these findings support Makoul and Peer's (2004) assertion that patients are either trouble or troubled. These depictions could have some serious consequences. Television presents the message that only bad people get sick, and this could create a problematic schema in the minds of viewers. Viewers could begin to associate "bad" with "illness". If viewers do not perceive themselves as "bad" people or do not engage in these destructive behaviors, viewers might underestimate their chances for developing diseases and illnesses. Also, research indicates there are already many health-related stigmas in society (Weiss, Ramakrishna, & Somma, 2006), and these negative depictions could contribute to their perpetuation. These depictions could increase the accessibility of these stigmas or create new ones.

It should also be noted that some medical professionals also engaged in destructive behaviors. Although television generally presents a positive image of

doctors and nurses on television, there are those who are drug addicts and excessive drinkers. In fact, two series, *House* and *Nurse Jackie*, revolve around medical professionals with drug addictions. These images, although not the norm throughout television, could also impact viewers' confidence in their own medical professionals. This is especially true with viewers of these two series, as the image of medical professionals struggling with addictions is repeated episode after episode and could create a very strong schematic link between medical professionals and drug addiction.

#### **4.2.4 Medical Professionals' Attitudes and Actions Toward Patients**

With the negative portrayal of patients, it would be plausible to assume that medical professionals on television would express negative attitudes about their patients. H14 posited that medical professionals would be more likely express negative attitudes than positive attitudes about patients, but this was not supported. Most medical professionals did not express an attitude about patients, and although negative attitudes were more common, there was no significant difference between the number of medical professionals with negative and positive attitudes. One positive implication of this finding is that viewers might assume medical professionals will not speak ill of them. If medical professionals spoke very critically and negatively about their patients on television, viewers might expect to be spoken about in this manner in the real world as well. To avoid this, viewers might limit their own health care visits. Another possible implication of this finding, however, is that viewers might get the impression that medical professionals do not care about patients. In addition to being regulated to minor roles, medical professionals barely talk about patients; it just contributes to the picture of unimportant patients.

This assertion is also somewhat supported by an examination of the modes of the medical professionals. H4 posited that doctors would be more focused on their personal lives than caring and curing for patients, and this was partially supported. Doctors were mostly concerned with curing their patients' illnesses and their own personal lives. Caring for their patients, in terms of their patients' emotional needs and comfort, was a significantly smaller focus for doctors than curing illnesses or their own personal concerns. For nurses, the result was almost identical. Nurses' personal lives and curing patients' illnesses dominated their storylines. Although caring for patients occurred more for nurses than doctors, it was also a significantly smaller focus than nurses' personal lives or curing illnesses. The fact that medical professionals' personal lives dominate their storylines is not surprising; past research has found that after the shift to doctor-centered shows, the personal lives of medical professionals also became the primary focus of the shows (Turow, 1989). By focusing on their personal lives, television is sending the message that most medical professionals do not care about patients; doctors and nurses will show concern about a patient's illness but not about the patient as a person. This is unfortunate, because research suggests that one of the most powerful predictors of patient satisfaction is caring for a patient as a person (Boudreaux, Ary, Mandry, & McCabe, 2000). Although medical professionals do focus on curing patients, their personal lives are much more important than their patients' feelings and emotional well-being, and this negative portrayal could be added to their health care schema. If viewers develop the perception that medical professionals will not care for them as a person, they might avoid attending regular visits or seeking necessary medical treatment.

#### **4.2.5 Patients**

Results have shown that patients are mostly negative characters who are largely unimportant in the medical world, but who are these characters? In terms of demographics, patients are similar to the general sample overall. Patients were slightly more male than the general character population (62.2% vs. 54.6%), but the majority of patients were white, between the ages of 11 and 50, and straight.

One area of examination with patients was where they would go for treatment. Social cognitive theory and cultivation suggest that viewers might model patients' behaviors and go to the same medical treatment locations shown on television or perceive these places as their only options. Most medical dramas in recent decades have focused on the ER and hospitals (Turow, 1989; Murphy et al., 2008), and this was hypothesized to occur in this sample as well (H10). Unfortunately the data were unreliable for the ER location, but hospitals were still the most common treatment location, so this hypothesis was partially supported. Most notably, no patients received treatment at primary care offices and only a few went to a clinic or a specialist's office. Consequently, these places might be highly inaccessible in viewers' minds. Research has shown that going to the emergency room for primary care wastes billions of dollars annually (Kalivanz, 2009), so if viewers model this behavior, it could have serious economic implications for the nation's health care system.

In addition to only showing treatment at hospitals, medical dramas have also primarily focused on traumatic injuries or rare illnesses (Jacobs, 2003; Murphy et al., 2008). As hypothesized in H9, trauma-related injuries and rare illnesses were more common than cancer, heart disease, diabetes, and cold/flu. In fact, injuries and rare illnesses made up more than 80% of all the medical conditions shown. Of the

more prevalent illnesses in society, cancer was the most common with one in ten patients having cancer on television. Heart disease and diabetes were less common, with one in twenty patients having heart disease and only one in one hundred having diabetes. No patient was suffering from a cold or the flu. Heart disease and cancer are the two leading causes of death in America and diabetes is the sixth (Heron et al., 2009), but on television, it seems as if almost no one suffers from these diseases. More characters actually suffered from infected hand/arm transplants than diabetes and cold/flu combined. From these depictions, viewers could develop serious misconceptions about the prevalence of these diseases in society and their own risk. Viewers could underestimate their chances for diseases like heart disease, diabetes, and cancer and overestimate their chances for gunshot wounds, meningitis, and complications from hand transplants, as these rare illnesses might be more accessible in viewers' minds. If, as cultivation theory suggests, viewers develop these perceptions, they might misconstrue their risk for developing more common diseases, misunderstand or ignore the symptoms of these diseases, and not engage in preventive behaviors.

One positive implication to note, however, is that if television is focusing on hospitals, the fact that the cold/flu are ignored on television could be a good thing. Going to the emergency room for primary care wastes money, so by not showing the cold or flu on television, viewers might not view the hospital as an appropriate location for treatment for these ailments. On the other hand, by ignoring primary care offices and clinics, viewers might not even think of these places as options for any illness, even the cold or flu.

Viewers might also underestimate the impact of behavioral factors in contracting illnesses; the majority of patients on television were not shown as responsible for causing their illness through their lifestyle choices or actions. This can have both positive and negative implications. A positive benefit could be that by reducing perceptions of personal responsibility for illness, these portrayals might lessen health-related stigmas; people tend to be more sympathetic to individuals who lack control over their illnesses (Weiner, 1993). But, on the other hand, these depictions might also cause viewers to underestimate the impact of their own behaviors on their health. If viewers see that illness is not something that is caused but just happens, they might not feel that preventive measures are important.

In addition to not being responsible for their illnesses, the majority of patients also had their health improve; over half of patients had their health improve. One fifth of patients had an unresolved or unclear outcome, around six percent remained the same, and only one character had a non-fatal decline in health. Medical dramas before the shift had outstanding success records, but these rates fell with changes in the shows (Turow, 1989; Vandekieft, 2004). So although it is not the sparkling success record of previous medical dramas (only 17.2% of patients died), patients still tend to get better or at least survive their medical conditions. Because of this, viewers might overestimate their chances for survival or develop high expectations for their own medical care. Also if viewers think medical treatment is always successful, they might ignore messages about preventive measures or not engage in these behaviors.

#### **4.2.6 Communicative Behaviors**

This second part of this study was concerned with how medical professionals and patients interact on television. Analyses yielded some interesting findings regarding health care interactions that could potentially have some serious implications.

Previous research has demonstrated that doctors do not interact with patients often and tend to primarily talk to other doctors on television (Makoul & Peer, 2004; Turow & Gans, 2002), so this was hypothesized to occur in this study (H11). Results indicate that doctors interact with other doctors significantly more than with patients, but doctors interacted with patients significantly more than any other characters. This was also seen with nurses, except nurses interacted with other nurses the most. As patients are the second most frequent interaction partners for medical professionals, it seems that medical professional-patient interactions occur frequently on television. But this result could also be inflated due to the sampling criteria; doctors and nurses were only included in the sample if they were a major character or if they were involved in a health care interaction. Thus, there could be many of medical professionals excluded from this sample that never talked to patients. Unfortunately, this cannot be determined through the data collected. But as doctors and nurses talked to patients significantly less than talking to each other, this is another result that indicates that patients are somewhat unimportant in the medical world on television. These repeated depictions of unimportant patients increase the chances of this viewpoint being adopted into viewers' health care schema, and this could translate into viewers feeling as if they would be ignored or treated as unimportant in real medical situations.

In addition to indicating that doctors do not often interact with patients on television, previous research has shown that when they do, doctors have the interpersonal power (Makoul & Peer, 2004). In real medical situations, medical professionals' communication styles directly impact the level of satisfaction patients have with their health care (Buller & Buller, 1987; Haskard, DiMatteo, & Heritage, 2009; Wanzer, Booth-Butterfield, & Gruber, 2004). Dominant communication styles, characterized by controlling the conversation, not listening, and being dramatic and argumentative, are associated with low patient satisfaction. Affiliative communication styles, on the other hand, are characterized as being friendly, open, and listening carefully, and are associated with high patient satisfaction. Because researchers have found that television typically shows doctors in positions of power and authority during interactions, H13 posited that doctors were more likely to use a dominant than affiliative communication style, and this hypothesis was supported. As dominant communication styles are associated with low patient satisfaction, this depiction could cause viewers to avoid visiting their physicians. Viewers might adopt this picture of dominant doctors into their health care schemas and feel as if their doctors will yell at them or be unfriendly, cold, or inattentive. If so, viewers might perceive the experience of attending regular checkups or going to the doctor for treatment as very undesirable.

This could also have a negative impact on doctors, as doctors might model this behavior. Social cognitive theory posits that there are four subfunctions to symbolic modeling (Bandura, 2002). Humans must be aware of a behavior (attention) and remember it (retention) to model the behavior. Then, they can perform the behavior (production), but they must want to perform it (motivation). Humans are

motivated by rewards they associate with a behavior. On television, doctors use dominant communication and are rewarded with high survival rates for their patients. So doctors viewing these television shows might be motivated to model the dominant communication styles seen on television, because they associate that behavior with success. And as Brownstein (2009) reports, doctors admit to picking up behaviors from television. If they model these communicative behaviors, doctors will communicate in a manner that leads to low patient satisfaction.

Contrary to doctors, nurses were found to equally use dominant and affiliative communication styles. This depiction is more positive than the depiction for doctors, but television still is not providing a cohesive picture of satisfying health care interactions. As such, there should not be an image of satisfying health care interactions in viewers' health care schemas.

In addition to looking at communication styles for different medical professionals, this study also examined the topics of health care interactions and the communication styles for these topics. Results indicate that treatment and symptoms are the most common topics discussed and the only topic not typically discussed was medical history. Research indicates that medical history is an important tool for diagnosis (Cohen & Java, 1995); if viewers are not aware of the need to discuss their medical history, they might be not prepared to discuss it, and medical professionals could have a difficult time diagnosing illness or misdiagnosis medical conditions.

For communication styles, medical topics (treatment, symptoms, and causes) were significantly more dominant than interpersonal topics (small talk and other interpersonal comments). As interpersonal topics were discussed less frequently than medical topics, viewers might develop the perception that they will only

encounter affiliative communication, the type of communication style they prefer, very briefly.

One area of concern for interactions was how patients communicated during health care decisions on television because social cognitive theory posits that viewers can model the behaviors shown in the media. If viewers model the participation levels shown on television, there could be serious implications for their health; patient participation has been shown to have a direct impact on patient satisfaction, commitment to treatment, and even health (Street, Jr. & Millay, 2001). Due to the fact that previous research has found that doctors normally dominate and control interactions (Makoul & Peer, 2004), which was also found to be the case in this study, H13 posited that patients would be passive participants when making health care decisions with doctors. Results indicated that most patient participation occurred at the level of passive participation (when a patient is physically and mentally able to participate but does not), but it only occurred significantly more than child participation (when a patient is a minor so he/she does not participate) at a less strict alpha level of .05. This same result was found for patient participation with nurses. Despite no significant differences, there are still some interesting implications to consider. Every level of patient participation had low scores on the scale, with the lower end of the scale indicating no interactions occurring at that level. This suggests that there were not many opportunities to make health care decisions in the first place. From these depictions, viewers might develop the perception that medical professionals are supposed to make all decisions regarding their health care; personally making health care decisions could be nonexistent in viewers' health care schemas. When viewers encounter opportunities to make decisions, they might remain passive

and potentially model a behavior that is significantly detrimental to their care and their health. But why would viewers want to emulate characters who are portrayed so negatively? Even if these characters are negative, they are successful in medical situations. Social cognitive theory suggests that viewers are more likely to model behaviors that are associated with rewards, and as just as described with doctors modeling dominant communication styles, the success rates for medical treatment on television is high. Patients on television are being rewarded for being uninvolved in their health care decisions, so viewers might very likely be modeling this problematic behavior.

### **4.3 Limitations**

There are some limitations of this study that need to be addressed. First, the emergency room location variable did not meet reliability standards and had to be excluded from analyses. This is unfortunate, as it limits the amount of information available about medical locations on television. Problems with this variable could have arisen from faulty definitions, ineffective coder training, or it could be too difficult to clearly distinguish these two locations on television. Future studies should attempt to make clearer distinctions in the coding definitions between an emergency room setting and a non-emergency hospital room setting, and if it is still shown to be unreliable, researchers should collapse these categories into one.

Another limitation of this study is that some of the coding schemes limited the data analysis techniques available for use. With all of the interaction data and a few other categories, data analysis techniques to conduct simultaneous multiple comparisons of the variables could not be implemented. Thus, the only practical solution was to utilize a series of paired-samples t-tests. But as stated in the results

section, the probability of making Type I errors, or rejecting the null when one should not, increases with multiple tests (Hayes, 2005). To counteract this, the acceptable alpha level for these hypotheses was increased to .01. However, with every increase in alpha level, the chance of making a Type II error, or not rejecting the null when one should, also increases. Therefore, the coding schemes and the data analysis techniques used increased the probability of Type II error for some tests. Fortunately, this does not appear to be the case as most analyses were statistically significant at  $\alpha = .01$ .

In addition to limiting the analyses to use, the coding schemes also solely focused on very broad characteristics. Although the study was able to gather information on general characterizations, such as “good” heroes and “bad” villains, it did not go deeper into these characterizations. What makes patients villains? What are doctors’ good and bad characteristics that make up their mixed type? Unfortunately, from this study, the answers are unknown as time limited the amount of variables this study could include.

Time and a lack of manpower also limited the way interactions were analyzed. For this study, interactions were examined at the character level. This means that characters could have had a wide range of interactions, but they were grouped together on a global scale. This was an efficient way to analyze this content and get an exploratory and global picture of what interactions are like on television. But, by not examining each interaction individually, this study only scratches the surface of what communicative behaviors are being depicted on television.

Finally, the nature of the study does not produce any evidence of effects of television content. As stated previously, content analysis is a study of media content; it is not a study of media effects. So although this study provided a discussion of

possible implications of the content, it lacks the ability to draw any definitive conclusions about its effects.

#### **4.4 Future Directions**

Despite its limitations, this study provides multiple avenues for future research. As this study is limited to only discussing television content and not its effects, one viable avenue for future research is a cultivation analysis. As Morgan and Signorielli (1990) explain, to test cultivation theory, the first step is to examine what television depicts. Following a content analysis, researchers can test whether television is contributing to viewers' conceptions of reality by creating survey questions based on the results of the content analysis. This study provides the material necessary to develop a survey instrument to conduct a cultivation analysis. Also, this discussion provided many possible behavioral effects of television's depiction of the medical world; researchers should test the premises of social cognitive theory and examine whether viewers are modeling any of the depicted behaviors.

Researchers should also conduct more in-depth analyses of the characters and their interactions. As previously stated, one of the limitations of this study is it looked at broad characteristics like "good" versus "bad" and measured interaction behaviors on a global scale. Thus, it only scratches the surface of television's depictions of the medical world. Future researchers could expand the examination to include multiple elements about characters' personalities and their behaviors, as this would provide a clearer picture of how television is characterizing medical professionals and patients. Also, it might be a fruitful to investigate health care interactions at the interaction level as previous research has done (Makoul & Peer, 2004). By examining each interaction individually and not grouping all of a

character's interactions together, the analyses could provide a deeper understanding of the type of communicative behaviors being depicted on television. Along the same vein, researchers should take a closer look at what specific participative behaviors patients on television are displaying. Patient participation can include many different behaviors, such as asking questions, disagreeing, sharing opinions and medical experiences, and many more; researchers should examine what specific participative behaviors are being depicted (or not depicted) on television.

Additionally, researchers should examine if there are any differences between the types of characters that exhibit certain communicative behaviors. For example, male doctors might use a different communication style than female doctors, or white nurses might use a different communication style than black nurses. Also, there could be differences in the types of patients who participate in their health care and those who do not. Researchers should examine if there are any differences in medical professionals and patients' communicative behaviors in terms of their demographic characteristics, character types, and other distinguishing variables. This examination could provide information about the types of people who are more susceptible to modeling certain behaviors.

Finally, it would be interesting to examine the differences between the cable and broadcast programs. This study included both types of programming in the sample, because it increases the generalizability of this study. Both types of programming are popular and reach vast audiences, so both contribute to the picture of reality television presents. However, as it was outside of the scope of this study, differences between these types of programming were not analyzed. It would be interesting to examine this content to see if there are any differences in how these

channels portray the medical world. Results could highlight the need for researchers to include both in their subsequent analyses or the need to examine them separately. With these possible avenues and others, this study will hopefully act as a springboard for future research in the area.

#### **4.5 Conclusion**

Television acts as a socializing agent. Television displays images of what types of people and places exist in the world, what behaviors are acceptable and frowned upon, and who and what we should trust and fear. Television presents a picture of the world that is often incorporated into viewers' perceptions of reality. In order to entertain, this picture is often exaggerated, sensationalized, and ultimately inaccurate. This study provided a snapshot of the medical world on television. Unfortunately for viewers and the health care industry, television presents a rather discouraging picture.

One of the main objectives of this study was to examine how patients are portrayed. As the majority of viewers will assume the role of patient in their real lives, this portrayal can have a large impact. Unfortunately, it appears this impact could be largely negative. Television depicts patients as "bad" people who are unimportant in medical situations. They suffer from uncommon diseases and traumatic injuries but normally survive. Patients on television are also completely uninvolved in their health care decisions. These portrayals can cause viewers to look down on the ill and perpetuate health-related stigmas, and if viewers do not perceive themselves as bad, they can underestimate their chances of getting sick. Viewers can also severely underestimate their chances of developing more common illnesses, such as heart disease and cancer, and overestimate their chances of survival, which can lead to being

misinformed about these diseases and neglecting to engage in preventive measures. Also, if viewers perceive themselves as unimportant in their health care decisions or to medical situations in general, they might limit their involvement in their health care. As researchers have found (Katz, 2006; Valente, et al., 2007; Wilkin, et al., 2007), television can contribute to viewers' health beliefs and behaviors, so these consequences could be very real.

Health professionals, especially doctors, should also be concerned with their depictions. For paramedics, hospital administrators and other health care workers, the concern is not really with the depiction (although hospital administrators are quite negative), but rather the lack of a depiction. These characters are largely ignored on television, and viewers might in turn largely ignore them in the real world as well. For doctors, though, the story is much different. Doctors are depicted as the most important people in the medical world. Even though they are the most important, doctors are starting to be portrayed more negatively than in previous decades. Doctors do not seem to care about their patients and are more concerned with their own personal lives. They are also mostly shown communicating with patients in a largely unsatisfying manner. In the past, there were concerns that television's positive depiction of doctors was unrealistic. Although television now presents the public with a more realistic picture of doctors, there are still concerns with these depictions. Mainly, the concern changes from real doctors being unable to live up to the standards created by television doctors to wondering if viewers of this content still trust their real doctors.

The only characters who remained largely unscathed on television are nurses. Nurses are mostly good people (even those who suffer from drug and alcohol

problems), and they demonstrate many of the behaviors that patients desire in their health professionals (although not all of them). This image boost could have a very positive effect on the public's opinion of the nursing discipline.

So although Michelle Goodman, the columnist from ABCNews.com, and others might argue that television producers are serving the public well by entertaining them with these dramatic portrayals of health care, the results of this study do not agree with that sentiment. These portrayals can add to pre-existing health-related stigmas, anxiety over health visits, and misinformed beliefs about diseases and preventive measures. As our health is quite important, it is hard to escape the impression that producers of this content are actually doing the health care industry and the public a disservice.

## Appendix A

### RECORDING INSTRUMENT- PROGRAMS

- 1 PROGRAM ID NUMBER
- 2 CODER ID NUMBER
- 3 MONTH OF BROADCAST
- 4 DAY OF BROADCAST
- 5 YEAR
- 6 TIME OF BROADCAST
- 7 NETWORK
  - 1= ABC
  - 2= CBS
  - 3= NBC
  - 4= FOX
  - 5= WB
  - 6= UPN
  - 7= PAX
  - 8= CW
  - 9= TNT
  - 10= USA
  - 11= SHOWTIME
- 8 DURATION OF PROGRAM IN MINUTES  
(030, 060, 090, 120, etc.)
- 9 FORMAT
  - 0= cannot code
  - 1= cartoon
  - 2= TV play
  - 3= feature film/TV movie/mini-series
  - 4= reality drama/re-enactment
  - 5= documentary
  - 6= news magazine/talk show
  - 7= variety/award
  - 8= sports

9= game show

**10 PROGRAM TYPE**

0= cannot code  
1= crime  
2= western/action adventure  
3= drama  
4= science fiction/horror  
5= situation comedy  
6= comedy, not sitcom or variety skits  
7= other children's program  
8= variety/award  
9= other

**11 PROGRAM TONE**

0= cannot code  
1= mostly comic, humorous  
2= mixed, both  
3= mostly serious, even if in comedy

**12 CAST: RACE**

0= cannot code  
1= all white  
2= mostly white (some minorities appear)  
3= mixed  
4= mostly minority (some whites appear)  
5= all minority

**13 SETTING**

0= cannot code  
1= urban  
2= suburban  
3= rural  
4= mobile (plane, boat, train)  
5= outer space  
6= other  
7= mixed

**14-17 THEMES AND ASPECTS OF LIFE- EMPHASIS**

0= no attention paid to the theme  
1= theme is minor part of the plot  
2= theme is significant to plot  
3= theme is outstanding focus of plot

**14 MENTAL HEALTH**, serious emotional disorder requiring therapy; cure for mental illness

**15 PHYSICAL ILLNESS**, injury (bodily wound, gunshot, broken leg, etc.) requiring therapy, treatment, medicine, or cure

**16 PHYSICAL HANDICAP**, or disability

**17 HEALTH PORTRAYALS** include the discussion or depiction of illness, disease, or injury. This includes the discussion by those suffering from the illness/disease/injury or the medical professionals treating it.

**18-23 SEVERITY OF ILLNESS**

0= does not appear

1= severity minor (does not interfere with everyday life, more of an annoyance)

2= severity moderate (interferes with everyday life, requires minor medical treatment, but is not life-threatening)

3= severity major (life-threatening and requires medical treatment)

**18 CANCER**

**19 HEART DISEASE**

**20 DIABETES**

**21 COLD/FLU**

**22 INJURY**

**23 OTHER, WRITE IN**

## Appendix B

### RECORDING INSTRUMENT- CHARACTERS

- 1 PROGRAM ID NUMBER
- 2 CODER ID NUMBER
- 3 MONTH OF BROADCAST
- 4 DAY OF BROADCAST
- 5 YEAR
- 6 TIME OF BROADCAST
- 7 NETWORK
  - 1= ABC
  - 2= CBS
  - 3= NBC
  - 4= FOX
  - 5= WB
  - 6= UPN
  - 7= PAX
  - 8= CW
  - 9= TNT
  - 10= USA
  - 11= SHOWTIME
- 8 DURATION OF PROGRAM IN MINUTES  
(030, 060, 090, 120, etc.)
- 9 FORMAT
  - 0= cannot code
  - 1= cartoon
  - 2= TV play
  - 3= feature film/TV movie/mini-series
  - 4= reality drama/re-enactment
  - 5= documentary
  - 6= news magazine/talk show
  - 7= variety/award
  - 8= sports

9= game show

**10 PROGRAM TYPE**

0= cannot code  
1= crime  
2= western/action adventure  
3= drama  
4= science fiction/horror  
5= situation comedy  
6= comedy, not sitcom or variety skits  
7= other children's program  
8= variety/award  
9= other

**11 PROGRAM TONE**

0= cannot code  
1= mostly comic, humorous  
2= mixed, both  
3= mostly serious, even if in comedy

**12 CAST: RACE**

0= cannot code  
1= all white  
2= mostly white (some minorities appear)  
3= mixed  
4= mostly minority (some whites appear)  
5= all minority

**13 SETTING**

0= cannot code  
1= urban  
2= suburban  
3= rural  
4= mobile (plane, boat, train)  
5= outer space  
6= other  
7= mixed

**12 CHARACTER STATUS**

1= major character  
2= minor character

**13 MEDICAL ROLE**

0= cannot code  
1= doctor  
2= nurse

3= hospital administrator  
4= patient  
5= patient's relative/friend  
6= medical technician  
7= EMT  
8= other medical professional, write in

**14 OCCUPATION** Please write in

**15 GENDER/SEX**

0= cannot code  
1= male  
2= female

**16 RACE of character**

0= cannot code  
1= white  
2= black  
3= Asian  
4= Native American  
5= other

**17 ETHNICITY**

0= cannot code  
1= Hispanic, Latino  
2= Middle Eastern/Indian  
3= European/Scandinavian  
4= other

**18 MARITAL STATUS**

0= cannot code  
1= apparently not married/no reference  
2= impending marriage  
3= presently married  
4= separated  
5= formerly but no longer married (divorced, widowed)  
6= remarried  
7= mixed  
8= cohabiting, "living with" someone; must be of opposite sex  
9= involved in a homosexual or lesbian relationship

**19 SEXUAL ORIENTATION**

0= cannot code  
1= straight  
2= gay/lesbian

3= bisexual

**20 CHRONOLOGICAL AGE** (Record chronological age as known or estimated-01 to 99)

**21 SOCIAL AGE**

0= cannot code  
1= child/adolescent  
2= young adult (few or no family responsibilities;  
can be from late teens to mid-thirties)  
3= settled adult (family, established career)  
4= elderly, old

**22 HAIR COLOR**

0= cannot code  
1= blond  
2= red/auburn  
3= light brown  
4= brown  
5= black  
6= bald- balding  
7= grey  
8= other

**23 SOCIAL CLASS**

0= cannot code  
1= clearly upper, obvious wealth  
2= upper middle  
3= lower middle  
4= clearly lower, obvious poverty

**24 ROLE OF THE CHARACTER**

0= cannot code  
1= mostly light, comic  
2= neither light nor serious, mixed, unclear  
3= mostly serious

**25 CHARACTER TYPE**

0= cannot code  
1= "good"- protagonist, hero type  
2= mixed  
3= "bad"- antagonist, villain type

**26 OVERALL BEHAVIOR**

0= cannot code  
1= positive

2= neutral/ambivalent  
3= negative

**27 DRUG USE-** does character take drugs (prescription or otherwise) of any kind? Code the highest degree.

0= cannot code  
1= no reference to character's taking drugs  
2= takes drugs under proper doctor's care  
3= takes drugs (not know if under doctor's care)  
4= takes drugs excessively  
5= uses drug recreationally  
6= a drug addict (specific information exists)

**28 SMOKING-** does the character smoke?

0= cannot code  
1= no reference to character's smoking/character does not smoke  
2= specific information that character smokes  
3= character smokes excessively (chain smoker)

**29 DRINKING-** does the character drink alcoholic beverages?

0= cannot code  
1= no reference to character's drinking/character does not drink  
2= specific information that character drinks  
3= appears to be an alcoholic  
4= specific information character is an alcoholic

**30 DRINKING- ACCEPTABILITY**

0= cannot code  
1= character does not drink  
2= drinks, behavior acceptable  
3= drinks, behavior acceptable and not acceptable  
4= drinks, behavior no acceptable

**31 VIOLENCE COMMITTED BY CHARACTER** - Does the character commit any violence? Code the highest degree.

0= does not commit violence  
1= commits non-fatal violence; hurts but does not appear to kill anyone  
2= commits fatal violence; kills or appears to kill; fatal consequences indicated

**32 JUSTIFIED VIOLENCE** (Character commits violence that is portrayed as being just or as a means to an end).

0= character did not engage in violent behavior  
1= character's violent behavior was not portrayed as justified  
2= character was portrayed as committing justified violence

**33 IMMORAL VIOLENCE**

0= character did not engage in violent behavior  
1= character's violent behavior was no portrayed as being immoral  
2= character was portrayed as committing immoral violence

**34 CRIME COMMITTED BY CHARACTER-** Does character commit a criminal act?

0= does not commit a criminal act  
1= commits a criminal act

**35 OFFENSIVE/EXPLICIT LANGUAGE**

0= no offensive language  
1= infrequent offensive language  
2= moderate use of offensive language  
3= frequent use of offensive language

**36 MENTAL ILLNESS**

0= none indicated  
1= minor illness (outpatient therapy; in control)  
2= major illness (hospitalized, not in control)

**37 PHYSICAL DISABILITY**

0= none indicated  
1= minor disability (limp, hearing aid)  
2= major illness (wheelchair, blind, deaf)

**38 PHYSICAL ILLNESS**

0= none indicated  
1= minor ailment (cold, cough)  
2= major ailment (sick in bed, sees doctor)  
3= significant ailment (in hospital)

**39-44 SEVERITY OF ILLNESS**

0= does not appear  
1= severity minor (does not interfere with everyday life, more of an annoyance)

2= severity moderate (interferes with everyday life, requires minor medical treatment, but is not life-threatening)  
3= severity major (life-threatening and requires medical treatment)

- 39 **CANCER**
- 40 **HEART DISEASE**
- 41 **DIABETES**
- 42 **COLD/FLU**
- 43 **INJURY**
- 44 **OTHER, WRITE IN**

45 **RESPONSIBILITY FOR ILLNESS-** Is the character shown as causing their condition, either through lifestyle choices or behaviors?

- 0= not ill
- 1= not responsible for illness
- 2= shown as responsible for illness
- 3= unclear/unknown

46 **TREATMENT OF ILLNESS**

- 0= no illness
- 1= character ill but receives no treatment
- 2= character receives treatment, but not from medical staff
- 3= character receives treatment from medical professionals

47-53 **TREATMENT LOCATIONS**

- 0= no treatment received
- 1= treatment received

- 47 **EMERGENCY ROOM**
- 48 **HOSPITAL, BUT NOT ER**
- 49 **PRIMARY CARE OFFICE**
- 50 **SPECIALIST'S OFFICE**
- 51 **CLINIC**
- 52 **HOME**
- 53 **OTHER, WRITE IN**

54 **OUTCOME OF TREATMENT OF ILLNESS**

- 0= no illness or treatment
- 1= character's health improves
- 2= character's health remains the same
- 3= character's health declines but does not die
- 4= character dies

5= unresolved/unclear  
6= other

**55 MEDICAL PROFESSIONALS' ATTITUDES TOWARD PATIENTS** any comments or expressions of feeling or belief about patients

0= not a medical professional  
1= medical professional, but no attitude expressed  
2= positive attitude toward patients  
3= negative attitude toward patients  
4= mixed attitude toward patients

**56-61 MODES** Describe the modes of the medical professional throughout the program; what were the focuses of this character's role in the plot?

0= not a medical professional  
1= does not appear in this mode  
2= minor focus  
3= major focus

**56 CARING-** primarily concerned for the patient's feelings, comfort, and family

**57 CURING-** focused on the patient's physical condition and treatment

**58 ADMINISTRATIVE-** Chief role was a manager of resources, including other health care workers

**59 BUSINESS-** focused on budget concerns, insurance problems, or other monetary issues

**60 EDUCATION-** Primarily involved in role as a teacher or learner

**61 PERSONAL-** Dealt with issues in personal life apart from role as a caregiver

**62 NUMBER OF HEALTH CARE INTERACTIONS**

Health care interactions include any interpersonal interaction between a medical professional and a patient/patient's representative, especially interactions regarding treatment decisions

**63-65 COMMUNICATION STYLE DURING HEALTH CARE INTERACTIONS**

0= does not participate in health care interactions  
1= no interactions in this communication style  
2= few interactions

- 3= moderate interactions  
4= most interactions
- 63 **DOMINANT COMMUNICATION STYLE**  
64 **AFFILIATIVE COMMUNICATION STYLE**  
65 **MIXED/NEUTRAL COMMUNICATION STYLE**
- 66-74 **TOPICS OF INTERACTIONS- FREQUENCY**  
0= does not participate in health care interactions  
1= no interactions  
2= few interactions  
3= moderate interactions  
4= most interactions
- 66 **SYMPTOMS**  
67 **MEDICAL HISTORY**  
68 **CAUSES OF ILLNESS**  
69 **TREATMENT OPTIONS/DECISIONS**  
70 **PERSONAL PROBLEMS (MEDICAL PROFESSIONAL'S)**  
71 **PERSONAL PROBLEMS (PATIENT'S)**  
72 **SMALL TALK**  
73 **OTHER INTERPERSONAL TOPICS (NOT ABOUT PROBLEMS)**  
74 **OTHER**
- 75-83 **TOPICS OF INTERACTIONS- COMMUNICATION STYLE**  
0= does not participate in health care interactions  
1= no interactions on this topic  
2= mostly dominant  
3= mostly affiliative  
4= both dominant and affiliative  
5= mostly neutral
- 75 **SYMPTOMS**  
76 **MEDICAL HISTORY**  
77 **CAUSES OF ILLNESS**  
78 **TREATMENT OPTIONS/DECISIONS**  
79 **PERSONAL PROBLEMS (MEDICAL PROFESSIONAL'S)**  
80 **PERSONAL PROBLEMS (PATIENT'S)**  
81 **SMALL TALK**  
82 **OTHER INTERPERSONAL TOPICS (NOT ABOUT PROBLEMS)**  
83 **OTHER**
- 84-90 **PATIENT PARTICIPATION DURING MEDICAL INTERACTIONS-** the extent to which patients produce verbal responses that have the potential to significantly

influence the content and structure of the interaction as well as the health care provider's beliefs and behaviors, such as asking questions, describing health experiences, expressing concern, giving opinions, making suggestions, disagreeing or interrupting, and stating preferences

0= does not participate in health care interactions

1= no interactions

1= few interactions

2= some interactions

3= most interactions

**84 UNCONSCIOUS** patient cannot participate in health care interactions due to state of unconsciousness or emergency

**85 CHILD** patient is a child, so parent or guardian is involved (or supposed to be involved)

**86 PASSIVE PARTICIPANT** patient is physically and mentally able to participate in health care interaction but does not

**87 MODERATELY ACTIVE PARTICIPANT** patient participates to a limited extent in health care interactions

**88 ACTIVE PARTICIPANT** patient participates in health care interactions

**89-94 INTERACT WITH WHOM-** whom does the character interact with during the program? This includes ALL interactions, not just those designated as health care interactions.

0= no interactions

1= few interactions

2= moderate interactions

3= most interactions

**89 DOCTORS**

**90 NURSES**

**91 PATIENTS**

**92 PATIENTS' FAMILY/FRIENDS**

**93 HOSPITAL ADMINISTRATORS**

**94 OTHER**

## REFERENCES

- Bandura, A. (2002). Social cognitive theory of mass communication. In J. Bryant, and D. Zillman (eds), *Media Effects: Advances in Theory and Research* (2nd ed), pp. 121-153. Hillsdale, NJ: Erlbaum.
- Boudreaux, E. D., Ary, R. D., Mandry, C. V., & McCabe, B. (2000). Determinants of patient satisfaction in a large, municipal ED: The role of demographic variables, visit characteristics, and patient perceptions. *American Journal of Emergency Medicine, 18*, 394-400.
- Brewington, K. (2009, August 9). Nurse practitioners pick up slack in providing primary care. Retrieved August 12, 2009 from <http://www.baltimoresun.com/health/bal-md.nurse09aug09,0,1842988.story>
- Brownstein, J. (2009, March 26). Do doctor dramas make for bad docs? When real doctors learn from actors who play doctors on TV. Retrieved June 6, 2009 from <http://abcnews.go.com/Health/WellnessNews/story?id=7178967&page=1>
- Buller, M. K. & Buller, D. B. (1987). Physicians' communication style and patient satisfaction. *Journal of Health and Social Behavior, 28*, 375-388.
- Byrd-Bredbenner, C., Finckenor, M. & Grasso, D. (2003). Health-related content in prime-time television programming. *Journal of Health Communication, 8*, 329-341.

Clark, J. N. (1992). Cancer, heart disease, and AIDS: What do the media tell us about these diseases? *Health Communication, 4*, 105-120.

Chory-Assad R. M. & Tamborini, R. (2001). Television doctors: An analysis of physicians in fictional and non-fictional television programs. *Journal of Broadcasting & Electronic Media, 45*, 445-521.

Chory-Assad R. M. & Tamborini, R. (2003). Television exposure and the public's perceptions of physicians. *Journal of Broadcasting & Electronic Media, 47*, 197-215.

Cohen, G., & Java, R. (1995). Memory for medical history: Accuracy of recall. *Applied Cognitive Psychology, 9*, 273-288.

Diefenbach, D. L. (1997). The portrayal of mental illness on prime-time television. *Journal of Community Psychology, 25*, 289-302.

Fall TV schedule for start of 2009-2010 season. (n.d.). Retrieved August 11, 2009 from <http://www.tvguide.com/special/fall-preview/fall-schedule.aspx>

Gerbner, G. (1990). Epilogue: Advancing on the path of righteousness (maybe). In N. Signorielli & M. Morgan (Eds.), *Cultivation analysis: New directions in media effects research*. Newbury Park, CA: Sage Publications, Inc.

Gerbner, G., Morgan, M. & Signorielli, N. (1982). Programming health portrayals. In D. Pearl, L. Bouthilet, & J. B. Lazar (Eds.) *Television and Behavior: Ten years of scientific progress and implications for the eighties, 1*, 291-307.

- Gerbner, G., Morgan, M., Signorielli, N., & Shanahan, J. (2002). Growing up with television: Cultivation processes. In J. Bryant, & D. Zillmann (Eds.), *Media effects: Advances in theory and research* (2 ed). Hillsdale, NJ: Erlbaum.
- Goodman, M. (2008, July 24). Supply-closet sex and instant DNA: The reality behind those as-seen-on-TV jobs. Retrieved June 6, 2009 from <http://abcnews.go.com/Business/CareerManagement/Story?id=5434444&page=1>
- Gordon, S. & Buresh, B. (2001). Doc Hollywood. *The American Prospect*, 34-35.
- Granello, D. H. (2000). Television viewing habits and their relationship to tolerance toward people with mental illness. *Journal of Mental Health Counseling*, 22, 162-175.
- Harter, L. M. & Japp, P. M. (2001). Technology as the representative anecdote in popular discourses of health and medicine. *Health Communication*, 13, 409-425.
- Hawkins, R. P. & Pingree, S. (1990). Divergent psychological processes in constructing social reality from mass media content. In N. Signorielli & M. Morgan (Eds.), *Cultivation analysis: New directions in media effects research*. Newbury Park, CA: Sage Publications, Inc.
- Haskard K.B., DiMatteo, M. R., & Heritage, J. (2009). Affective and instrumental communication in primary care interactions: Predicting the satisfaction of nursing staff and patients. *Health Communication*, 24, 21-32.
- Hayes, A. F. (2005). *Statistical methods for communication science*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

- Heart disease facts and statistics. (n.d.). Retrieved August 13, 2009 from <http://www.cdc.gov/heartdisease/statistics.htm>
- Heron, M., Hoyert, D. L., Murphy, S. L., Xu, J., Kochanek, K. D., & Tejada-Vera, B. (2009). Deaths: Final data for 2006. *National Vital Statistics Reports*, 57, 1-136.
- Jacobs, J. (2003). *Body trauma TV: The new hospital dramas*. London, UK: British Film Institute Publishing.
- Katz, D. L. (2008). Medicine and media: State of the union?. *American Journal of Preventive Medicine*, 34, 83-84.
- Katz, I. (2006). Explaining the increase in condom use among South African young females. *Journal of Health Communication*, 11, 737-753.
- Kavilanz, P. B. (2009, August 10). Health care's big money wasters. Retrieved August 12, 2009 from [http://money.cnn.com/2009/08/10/news/economy/healthcare\\_money\\_wasters/index.htm?section=money\\_news\\_economy](http://money.cnn.com/2009/08/10/news/economy/healthcare_money_wasters/index.htm?section=money_news_economy)
- Kline, K. (2003). Popular media and health: Images, effects, and institutions. In T. L. Thompson, A. M. Dorsey, K. I. Miller, & R. Parrot (Eds.), *Handbook of health communication*. Mahwah, NJ: Lawrence Erlbaurh Associates, Inc.
- Koch, T. (2008). The doctor in this House: lessons from TV's Gregory House, M.D. *The Canadian Medical Association Journal*, 178, 67-68.

- Krippendorff, K. (2004). *Content analysis: An introduction to its methodology* (2<sup>nd</sup> ed.). Thousand Oaks, CA: Sage Publications.
- Malmsheimer, R. (1988). *"Doctors only": The evolving image of the American physician*. Westport, CT: Greenwood Press.
- Makoul, G. & Peer, L. (2004). Dissecting the doctor shows: A content analysis of ER and Chicago Hope. In L. D. Friedman (Ed.), *Cultural sutures: Medicine and media*. Durham, NC: Duke University Press.
- Mares, M. (1996). The role of source confusions in television's cultivation of social reality judgments. *Human Communication Research*, 23, 278-293.
- McCabe, C. (2003). Nurse-patient communication: An exploration of patients' experiences. *Journal of Clinical Nursing*, 13, 41-49.
- McQuail, D. (2005). *Mass communication theory: An introduction* (5th ed.). London: Sage.
- Meier, E. (1999). The image of a nurse- myth vs. reality. *Nursing Economics*, 17, 273.
- Molloy, T. (2009, August 12). Recession-ready Mercy joins other nursing shows. Retrieved August 12, 2009 from <http://www.tvguide.com/News/NBCs-Mercy-Joins-1008920.aspx>

- Morgan, M. & Signorielli, N. (1990). Cultivation analysis: Conceptualization and methodology. In N. Signorielli & M. Morgan (Eds.), *Cultivation analysis: New directions in media effects research*. Newbury Park, CA: Sage Publications, Inc.
- Morgan, S. E., Harrison, T. R., Chewning, L., Davis, L., & DiCorcia, M. (2007). Entertainment (mis)education: The framing of organ donation in entertainment television. *Health Communication, 22*, 143-151.
- Murphy, S. T., Hether, H. J., & Rideout, V. (2008). How healthy is prime time? An analysis of health content in popular prime time television programs. A report to the Kaiser Family Foundation and the USC Annenberg Norman Lear Center's Hollywood, Health, and Society. Available online at: [www.kaisernetwork.org/](http://www.kaisernetwork.org/)
- Nelkin, D. An uneasy relationship: the tensions between medicine and the media. *The Lancet, 347*, 1600-1603.
- Perse, E. (1990). Cultivation and involvement with local television news. In N. Signorielli & M. Morgan (Eds.), *Cultivation analysis: New directions in media effects research*. Newbury Park, CA: Sage Publications, Inc.
- Perse, E. (2001). *Media effects and society*. Mahwah, NJ: Erlbaum.
- Pfau, M., Mullen, L. J., & Carrow, K. (1995). The influence of television viewing on public perceptions of physicians. *Journal of Broadcasting & Electronic Media, 39*, 441-458.

- Quick, B. L. (2009). The effects of viewing Grey's Anatomy on perceptions of doctors and patient satisfaction. *Journal of Broadcasting & Electronic Media*, 53, 38-55.
- Riffe, D. (2006). Media use affects perception of environmental hazards. *Newspaper Research Journal*, 27, 101-110.
- Schrum, L. J. (2002). Media consumption and perceptions of social reality: Effects and underlying processes. In J. Bryant, & D. Zillmann (Eds.), *Media effects: Advances in theory and research* (2 ed). Hillsdale, NJ: Erlbaum.
- Schrum, L. J. (1997). The role of source confusion in cultivation effects may depend on processing strategy: A comment on Mares (1996). *Human Communication Research*, 24, 348-358.
- Season program rankings (through 5/17). (2009, May 19). Retrieved August 11, 2009 from [http://abcmedianet.com/web/dnr/dispDNR.aspx?id=051909\\_05](http://abcmedianet.com/web/dnr/dispDNR.aspx?id=051909_05)
- Seidman, R. (2009, June 9). Showtime's Nurse Jackie pulls in 1.35 million viewers and is picked up for season two. Retrieved August 11, 2009 from <http://tvbythenumbers.com/2009/06/09/showtimes-nurse-jackie-pulls-in-135-million-viewers-and-is-picked-up-for-season-two>
- Seidman, R. (2009, August 10). TNT renews Hawthorne for a second season. Retrieved August 11, 2009 from <http://tvbythenumbers.com/2009/08/10/tnt-renews-hawthorne-for-a-second-season/24524>

- Seidman, R. (2009, August 11). iCarly, Burn Notice, The Closer, Royal Pains, WWE RAW and Monk top week's cable shows. Retrieved August 11, 2009 from <http://tvbythenumbers.com/2009/08/11/icarly-burn-notice-the-closer-royal-pains-wwe-raw-and-monk-top-weeks-cable-shows/24562>
- Shanahan, J. & Morgan, M. (1999). *Television and its viewer: Cultivation theory and research*. Cambridge, UK: Cambridge University Press.
- Shattell, M. (2004). Nurse-patient interaction: A review of the literature. *Journal of Clinical Nursing, 13*, 714-722.
- Shockey, J. (2009, May 8). Doctor drama: Medical humanities professor advises two TV shows. Retrieved May 22, 2009 from <http://live.psu.edu/story/39702/nw44>
- Signorielli, N., (1981). Content analysis: More than just counting minorities. In *In Search of Diversity: Minority Audiences and Programming Research*. Corporation for Public Broadcasting, Office of Communication Research.
- Signorielli, N. (1993). *Mass media images and impact on health: A sourcebook*. Westport, CT: Greenwood Press.
- Signorielli, N. (1989). The stigma of mental illness. *Journal of Broadcasting & Electronic Media, 33*, 325-331.
- Street, Jr., R. L. & Millay, B. (2001). Analyzing patient participation in medical encounters. *Health Communication, 13*, 61-73.
- TV's misleading miracles. (1996). *American Journal of Nursing, 96*, 9.

- Turow, J. (1989). *Playing doctor: Television, storytelling, and medical power*. New York: Oxford University Press.
- Turow, J. (1996). Television entertainment and the US health-care debate. *The Lancet*, 347, 1240-1243.
- Turow, J. & Gans R. (2002). As seen on TV: Health policy in TV's medical dramas. A report to the Kaiser Family Foundation. Available online at: [www.kaisernetwork.org/](http://www.kaisernetwork.org/)
- Turow, J. & Gans-Boriskin, R. (2007). From expert in action to existential angst: A half century of television doctors. In L. J. Reagan, N. Tomes, & P. A. Treichler (Eds.), *Medicine's moving pictures: Medicine, health, and bodies in American film and television* (pp.263-281). Rochester, NY: University of Rochester Press.
- Valente, T. W., Murphy, S., Huang, G., Gusek, J., Greene, J. & Beck, V. (2007). Evaluating a minor storyline on ER about teen obesity, hypertension, and 5 a day. *Journal of Health Communication*, 12, 551-566.
- Vandekieft, G. (2004). From City Hospital to ER: The evolution of the television physician. In L. D. Friedman (Ed.), *Cultural sutures: Medicine and media*. Durham, NC: Duke University Press.
- Video Consumer Mapping Study: Key Findings Report. (2009). A report to The Council for Research Excellence. Available online at: [http://wwenw.researchexcellence.com/VCMFINALREPORT\\_4\\_28\\_09.pdf](http://wwenw.researchexcellence.com/VCMFINALREPORT_4_28_09.pdf)

- Wahl, O., Hanrahan, E., Karl, K., Lasher, E. & Swaye, J. (2007). The depiction of mental illnesses in children's television programs. *The Journal of Community Psychology, 35*, 121-133.
- Wazner, M. B., Booth-Butterfield, M., & Gruber, K. (2004). Perceptions of health care providers' communication: Relationships between patient-centered communication and satisfaction. *Health Communication, 16*, 363-384.
- Weiner, B. (1993). On sin versus sickness: A theory of perceived responsibility and social motivation. *American Psychologist, 48*, 957-965.
- Weiss, M. G., Ramakrishna, J., & Somma, D. (2006). Health-related stigma: Rethinking concepts and interventions. *Psychology, Health, & Medicine, 11*, 277-287.
- Werts, D. (2009, January 29). Fox's medical marvel stays on top. Retrieved June 6, 2009 from <http://www.variety.com/article/VR1117999278.html?categoryid=3530&cs=1>
- Wilkin, H. A., Valente, T. W., Murphy, S., Cody, M. J., Huang, G., & Beck, V. (2007). Does entertainment-education work with Latinos in the United States? Identification and the effects of a telenovela breast cancer storyline. *Journal of Health Communication, 12*, 455-469.