

EXAMINING *GREY'S ANATOMY*:
A CONTENT ANALYSIS OF ELEMENTS OF MEDICAL SCHOOL
COMMUNICATION REFORM IN A POPULAR MEDICAL DRAMA

BY

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A Thesis Submitted to the Graduate Faculty of

WAKE FOREST UNIVERSITY GRADUATE SCHOOL OF ARTS AND SCIENCES

in Partial Fulfillment of the Requirements

for the Degree of

MASTER OF ARTS

Communication

May 2011

Winston-Salem, North Carolina

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DEDICATION

This thesis is dedicated to

Mrs. Betty W. Johnson

Thank you for giving me the opportunity to learn, and to write.

-Charlotte Strong

ACKNOWLEDGMENTS

First, I would like to thank my parents, Mark Lacko and Tracy Strong, for supporting my decision to put off the “real world” for two more years and enroll at Wake Forest. I know it didn’t seem like the best decision at the time, but everything happens for a reason, right? I was simply trusting my cape. Additionally, I would like to thank my big little brother, Jeffrey Lacko, for making me laugh and keeping me sane and humble while I was off succeeding.

I am so blessed to have such a (large) loving and supportive family. I would like to thank my grandfather, Jack Strong, for instilling an interest and love of education in me at a young age. I would also like to thank my extended Lacko and Strong families for constantly reminding me that learning can be cool, too. Molly, I may never figure out why I came to graduate school, but I know I wouldn’t have gotten through it without you. Thank you for helping me to keep my chin above water with your witty banter, “Strongisms,” and oversized baked goods. It’s just like eating an elephant.

Additionally, I am thankful for the Wake Forest faculty, without whom I (obviously) wouldn’t be where I am today. Dr. Marina Krcmar, thank you for playing such a huge role in the final stretch of my education. I appreciate your guidance, all of your valuable feedback, and for providing me with a brilliant role model! To my advisor, Dr. Steven Giles, thank you for accepting me as an advisee despite the geographical difficulty; thank you for your assistance, advice, and sense of humor. Dr. John Petrocelli, thank you for stepping up to the plate, and for providing valuable psychological insight to my project. Dr. John Llewellyn, thank you for your gracious editing; you are an exemplary writer, and one I am proud to have worked with! Finally, Dr. Louden, thank

you for giving me the opportunity to prove myself! Our entire class is blessed to have worked with you.

To the tremendous faculty at James Madison University: I *literally* haven't stopped talking about my beloved Alma Mater. Dr. Sharlene Thompson, thank you for sparking my interest in health communication. I can't imagine my life without that passion. Dr. Jim Query, Dr. Amber Messersmith, and Dr. Christine Robinson, thank you all for believing in my writing and for encouraging me to pursue a Master's Degree. An additional thank you to the teachers at Green Meadow Waldorf School, specifically David Sloan, John Wulsin, and David Blair: thank you for believing in me when I didn't. Turns out you were all right in the end.

Finally, I am so lucky to be surrounded by good friends. Thank you Shannon, Joel, Ellie, and Ben Bruggen for welcoming me into your lives this year. It has truly been a blessing, you all have brought a tremendous amount of happiness, creativity, and rationalism into my life, and I am eternally grateful. Tiara, Patty Ann, Dan, and Stephanie, we did it! Thank you all for helping me through. Kayla, Meredith, Rachel, and Reece, I would be nowhere without you. And last but not the smallest bit least, Miss Amy Rush. Who would have thought that I would find my strength in a Southerner. I now wear pearls on a regular basis, know how to make hors d'oeuvres, and have been known to (under very specific circumstances) utter the term "ya'll." I couldn't forget about you if I tried. Thank you for being my friend.

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ABSTRACT

This thesis explored the portrayal of medical school communication education reform (specifically the Common Ground Instrument), in a current, top-rated American medical drama. Manifest and latent content analysis was used in combination with qualitative theme analysis to analyze 20 episodes of *Grey's Anatomy*. Manifest content analysis revealed the presence of all six skills cited in the Common Ground Instrument: (1) rapport building, (2) agenda setting, (3) information management, (4) active listening, (5) addressing feelings, and (6) negotiation. Latent content analysis revealed multiple themes attributed to the presence or absence of each of the six skills, including: (1) the initiation of rapport building, (2) types of agenda setting, (3) managing information through statements, (4) passive observation, (5) reasons patient feelings were not addressed, and (6) the most commonly used tools for negotiation. Qualitative theme analysis revealed the following five implications: (1) influence of family members, (2) influence of physician bias, (3) statements vs. questions, (4) passive observation, and (5) communication as a process. Implications of *Grey's Anatomy* viewership are discussed in terms of Entertainment Education, Cultivation Theory, Social Cognitive Theory, and the Health Belief Model.

CHAPTER I

INTRODUCTION

Despite being conceptualized as a central human behavior, the nature of “talk” in physician-patient encounters is often overlooked (Roter & Hall, 2006). In health communication, talk intuitively includes shared verbal cues, such as words, facts, and advice. Talk extends further, however, to include nonverbal expressions and cues in which unspoken transactions are embedded, such as a grimace of pain, flushed cheeks of embarrassment, or the high-pitched voice of anxiety (Roter & Hall, 2006). Talk is everywhere in medical encounters, but only recently have health communication scholars begun to study the implications of talk on the overall quality of care provided to a patient.

Over the past two decades, health communication researchers have demonstrated the positive outcomes of communication episodes between physicians and their patients. For the patient, positive outcomes include increased coping mechanisms (Roter & Hall, 2006), satisfaction with care and giving of consent (Haskard, White, Williams, DiMatteo, Rosenthal, & Goldstein, 2008; Yedidia, Gillespie, Kachur, Schwartz, Ockene, Chepatis, Snyder, Lazare, & Lipkin, 2003), cooperation, trust, adherence to treatment, and improved health status (Bredart, Boulec, & Doubeaulx, 2005; Maynard & Heritage, 2005). For the physician, positive outcomes include reduced probability of malpractice litigation and decreased burnout (Bredart et al., 2005), minimization of medical mistakes (Gallagher, Waterman, Ebers, Fraser, & Levinson, 2003; Hannawa, 2009; McNeill & Walton, 2002), and increased confidence (Haskard et al., 2008). As a result of these (and

other) benefits, the 1990's saw an increased emphasis on improving physician communication skills during medical school training (Brunett, Campbell, Cole-Kelly, Danoff, Frymier, Goldstein, Gordon, Klass, Kurtz, Laidlaww, Lang, MacLellan, Makoul, Miller, Novack, Rider, Simon, Sluyter, Swing, Weston, & Whelan, 2001; Simpson, Buckman, Stewart, Maguire, Lipkin, Novack, & Till, 1991).

According to Simpson et al. (1991), highly structured communication programs, in which “specific skills are identified, demonstrated, practiced, and evaluated, tend to be more effective than less structured programs” (p. 1386). Thus, in response to communication curricula resolutions put forth by associations governing accreditation, health communication professionals were tasked with identifying a set of widely applicable generic or core communication skills that could be systematically taught and assessed (Brunett et al., 2001; Lang, McCord, Harvill, & Anderson, 2004; Makoul, 2003). Using suggestions from international consensus statements, health communication professionals succeeded in proposing updated guidelines and standards for education and professional practice purposes that were used to create standardized evaluation instruments (Brunett et al., 2001). Since 1995, multiple examples of such assessment instruments have been developed to teach, guide, and evaluate medical students' communication skills (Brunett et al., 2001).

While each of these evaluation instruments frames aspects of communication skills in slightly different ways, there are several key tasks mentioned in virtually all instruments, including building a relationship, opening the discussion, gathering information, understanding the patient's perspective, sharing information, reaching agreement on problems and plans, and providing closure (Brunett et al., 2001). While the

use of standardized communication instruments has proven to be an effective means of increasing physician communication competence (Haskard et al., 2008; Lang et al., 2004; Yedidia et al., 2003) patients must also recognize their part in ensuring successful medical communication episodes (Roter & Hall, 2006)

Traditionally, messages about health communication were broadcast to lay audiences through popular media (e.g., television) in a number of ways, including Public Service Announcements (PSAs), direct-to-consumer advertising, and news reports. More recently, health communication scholars have begun embedding prosocial messages in popular entertainment media, a communication technique known as entertainment education (Ye & Ward, 2010). Health communication research has demonstrated that entertainment education can have a positive impact on health-related expectations, awareness, knowledge, beliefs, attitudes, and/or behaviors (for examples, see Hestroni, 2009; Morgan, Movius, & Cody, 2009; Ye & Ward, 2010).

There are several theories used throughout entertainment education literature which explain its effectiveness, including Cultivation Theory and Social Cognitive Theory. Cultivation Theory asserts that television viewing blurs our perception of the line between social reality and television reality (e.g., Dutta, 2007; Hestroni, 2009; Quick, 2009), while Social Cognitive Theory implies that television audiences can learn knowledge, attitudes, and behaviors through observing the relevant performances of others in various contexts (e.g., Hether, Huang, Beck, Murphy, & Valente, 2008; Morgan et al., 2009; Ye & Ward, 2010). Through Cultivation and Social Cognitive Theories, health communication researchers have gained a clearer understanding as to why the

mass media and entertainment education have such a profound impact on the way lay audiences' expectations are influenced by health-related storylines.

As a result of the influence of popular media on expectations, analyzing scripted medical dramas for elements of universal skills and guidelines in physician-patient communication instruments could provide a clearer picture of what patients expect to experience during medical encounters. As evidence demonstrates that viewers obtain a vast amount of information concerning what interactions with physicians are and/or should be like from television shows, it is especially important for health communication researchers to know what these shows say. For physicians, it is crucial to know what patients' expectations are coming into medical interactions and where those expectations are coming from. For patients, it is necessary to draw attention to what those expectations are, and that the expectations may be coming from a flawed source (e.g., medical dramas).

While several studies have analyzed medical dramas (e.g., frequency of diagnoses, survival rates, and character demographics) (e.g., Hestroni, 2009; Ye & Ward, 2010), none of these have examined the way in which modern medical dramas portray physician-patient communication. Therefore, research is needed to ensure medical communication interactions between physicians and patients are not hindered by unrealistic expectations. My thesis will use latent and manifest content analysis in combination with qualitative thematic analysis to identify elements of one particular communication tool used in medical school training, the Common Ground Instrument, as those elements are portrayed in a current, top-rated medical drama.

CHAPTER II

LITERATURE REVIEW

Communication between a physician and a patient is a central clinical function during medical interaction (Simpson et al., 1991). A majority of essential diagnostic information is expressed during the initial medical interview, yet physicians have historically overlooked the importance of such interactions (Simpson et al., 1991; Groopman, 2008). For instance, one well-known health communication study found that, on average, patients were interrupted by physicians a mere 18 seconds into their opening dialogue describing their health concerns (Beckman & Frankel, 1984). After health communication professionals consistently observed that patient satisfaction, compliance, and overall health outcomes are highly dependent on a physician's interpersonal communication skills, the 1990's saw an increased emphasis on improving these skills at the source: medical school (Brunett et al., 2001; Simpson et al., 1991).

Medical School Reform

In 1995, the Liaison Committee on Medical Education (LCME) and the Committee on Accreditation of Canadian Medical Schools (CACMS) first adopted a resolution stating that “there must be specific instruction in communication skills as they relate to physician responsibilities, including communication with patients, families, colleagues, and other health professionals” (LCME, 2006, p. 2) in order for medical schools to be granted accreditation. These communication interventions proved to be so successful that they have been implemented beyond initial medical school training; the

Accreditation Council for Graduate Medical Education (the body which oversees US residency programs) and the American Board of Medical Specialties (the body which oversees certifying specialty physicians) both implemented further communication competency training for practicing physicians in 1999 (Makoul, 2003).

As a result of the resolutions put forth by the bodies governing accreditation, health communication professionals were given the responsibility of identifying a set of widely applicable generic, core communication skills that could be systematically assessed (Brunett et al., 2001; Lang et al., 2004; Makoul, 2003). Highly structured communication programs, in which “specific skills are identified, demonstrated, practiced, and evaluated, tend to be more effective than less structured programs” (Simpson et al., 1991, p. 1386). Thus health communication professionals were tasked with developing structured courses on clinical communication based on the selected communication skills.

Building on suggestions from international consensus statements, health communication professionals succeeded in proposing updated guidelines and standards for education and professional practice purposes that were used to create standardized evaluation instruments (Brunett et al., 2001). Since 1995, multiple examples of assessment instruments have been developed to teach, guide, and evaluate medical students’ communication skills (Brunett et al., 2001), including the Bayer Institute for Health Care Communication E4 Model (Keller & Carroll, 1994), Three Function Model/Brown Interview Checklist (Novack, Dube, & Goldstein, 1992), The Calgary-Cambridge Observation Guide (Kurtz, Silverman, & Draper, 1998), the Patient-Centered Clinical Method (Stewart, Belle-Brown, Weston, McWhinney, McWilliam, & Freeman,

1995), the SEGUE Framework for Teaching and Assessing Communication Skills (Makoul, 2001), and the Common Ground Instrument (Lang et al., 2004).

While each of these evaluation instruments frames aspects of communication skills in slightly different ways, there are multiple commonalities among them. The first aspect of physician-patient communication that is consistently evaluated is the importance of forming and maintaining an interpersonal relationship (Brunett et al., 2001; Simpson et al., 1991). The success of relationship building rests on the physician's ability to open discussion by eliciting the patient's story of illness, and consequently identifying associated perceptions, feelings, and expectations (Brunett et al., 2001; Simpson et al., 1991). Successful relationship building establishes physicians and patients as partners, and thus shapes the flow of the subsequent communication interaction between them.

Another important aspect of physician-patient communication that is featured in evaluation instruments is the physician's ability to gather information from the patient. Information gathering requires the appropriate use of open- and close-ended questions, structuring, clarifying, and summarizing information, actively listening, and guiding the direction of the interview through diagnostic reasoning (Brunett et al., 2001; Simpson et al., 1991). Next, physicians must strive to understand the patient's perspective. By exploring contextual factors (e.g., culture, age, gender), physicians will be better able to acknowledge and respond to beliefs, concerns, and expectations about health and illness (Brunett et al., 2001; Simpson et al., 1991).

Physicians are also responsible for effectively sharing information by using language the patient can understand, regularly checking for understanding, and encouraging questions (Brunett et al., 2001; Simpson et al., 1991). Once health problems

have been identified, physicians should encourage patients to participate in decision making to the extent that he or she desires (Brunett et al., 2001; Simpson et al., 1991). Patients must be willing and able to follow prevention and/or treatment plans; in order to increase patient efficacy, physicians should identify and enlist possible resources and social supports (Brunett et al., 2001; Simpson et al., 1991). Finally, physicians must provide closure by exhausting patient issues or concerns, summarizing and agreeing with the plan of action, and discussing follow-up steps (Brunett et al., 2001 Simpson et al., 1991).

Research shows that dedicated communications curricula in medical school significantly improved students' competence in employing core communication skills during interviews with patients (Yedidia et al., 2003). Improved communication competence has been shown to decrease patient anxiety (Roter & Hall, 2006), dissatisfaction (Haskard et al., 2008; Yedidia et al., 2003), and malpractice allegations (Bredart et al., 2005), while simultaneously increasing patient participation (Brunett et al., 2001; Simpson et al., 1991), compliance, and ultimately the outcome of treatment (Haskard et al., 2008; Yedidia et al., 2003). Therefore, it is imperative that US medical schools continue implementation and evaluation efforts aimed at improving provider-patient communication competence.

Unfortunately, training medical students and practicing physicians on how to more effectively communicate during health care interactions is only half of the battle; patients are also responsible for increasing the effectiveness of such interactions. First and foremost, patients' are expected to tell the stories of their *illness experiences* (Roter & Hall, 2006). Patient stories serve physicians in that they allow the physician to get to

know the patient in a fundamental and intimate way; stories allow the physician to explore the context of the illness which may give clues pointing towards a correct diagnosis (Groopman, 2008; Roter & Hall, 2006). Telling their own stories serves the patient in that the retelling of an experience provides a “cathartic release and the opportunity for insight and perspective” (Roter & Hall, 2006, p. 7).

Despite the advantage of being open and honest in the telling of one’s illness experience, patients are often reluctant to share openly with their physicians. This reluctance may stem from fear of physician disinterest, embarrassment, or unimportance (Roter & Hall, 2006). Due to the positive impact that sharing stories of illness has on patient health outcomes, it is critical that patients be encouraged to share these stories more openly. Patients can be encouraged to share their stories through both interpersonal relationships and the popular media. Interpersonal relationships shape expectations through the telling of experiences; when individuals are distressed, they search for similar others to compare themselves to (Festinger, 1954; Roter & Hall, 2006). This comparison allows individuals to gauge feelings and define normative behavior for themselves that incorporates personal characteristics (e.g. race, age, nature of the illness). In addition to turning to known others for comparison, individuals may turn to popular media as a means of shaping expectations about what is “normal” in an unfamiliar situation (Dutta, 2007; Hestroni, 2009; Kennedy, O’Leary, Beck, Pollard, & Simpson, 2004).

Media Influences on Health

Traditional forms of media, including television, newspapers, and radio, are primary sources of health information for many American adults (Ye & Ward, 2010). Popular entertainment media has proven to be a useful method of conveying medical

information and technological developments to lay audiences, and helps to shape people's health-related beliefs, affects, and behaviors, thereby enhancing health conditions of the public and promoting a healthier society (Hestroni, 2009; Park & Reber, 2010). Bouman (2009) presented three international trends that are fueling the ever-expanding use of entertainment media for health education, including the unparalleled growth of entertainment media over the last two decades, the expansion of technological and communication systems on a global scale, and an increasingly blurred line concerning what programs serve as entertainment and what programs serve as educational.

According to Hestroni (2009) and Jason (1998), media dependency is particularly high concerning health information regarding diseases, prevention, medical procedures, and survival rates. Reliance on media is exacerbated by the lack of "availability of alternative ways to obtain [health] information, ambiguity and unpredictability of alternative sources of knowledge, and a sense of relevancy and threat" (Hestroni, 2009, p. 2). According to Kennedy et al. (2004), television broadcasts "have been shown to increase knowledge of health issues, promote attitudes and norms that support prevention, model prevention behaviors, and elicit prevention behaviors" (p. 288). Most nations feature a variety of television entertainment programming, including talk shows, game shows, soap operas, reality programs, and dramas. In the US, medical dramas are among the most popular shows on television (Ye, 2006).

Medical Dramas. According to Ye (2006), televised portrayals of health-related affairs in television dramatic medical programs serve three purposes: "to inform audiences on health information, to shape perceptions of medical professionals, illnesses

and diseases, and medical treatments and technologies, and to affect health-related behaviors, such as prompting [viewers] to visit doctors and helping [viewers] make health choices” (p. 1). By the very nature of being classified as “dramatic” programming however, the format of medical dramas suggests, at the very least, a “substantial exaggeration on the part of the personal attributes of doctors who work in a hospital” (Hestroni, 2009, p. 5).

For example, medical dramas inescapably place limitations on the feasibility of clinical accuracy; medical maladies are introduced and (often) resolved in the span of a single 45-minute episode, while the maladies themselves are biased towards the highly dramatic diseases (e.g., mental illness) or gruesome (e.g., car accidents). Additionally, viewers are introduced to tangled webs of hospital romances and rivalries “that violate the ethical and professional codes by which the overwhelming majority of physicians operate” (Hestroni, 2009, p. 5). That said, the production staff employed by current medical dramas such as *Grey’s Anatomy* and *House, MD* includes teams of professional health communication advisors who attempt to ensure some degree of clinical and diagnostic accuracy (Hestroni, 2009). Due to health communication professionals’ impact, medical dramas have evolved as the sociological context in which these medical advisors operate has shifted. Jacobs (2003) classified the evolution of the medical drama into three phases: the Paternal Phase, the Conflict Phase, and the Apocalyptic Phase.

The Paternal Phase: Blind Trust. The initial medical drama, *City Hospital*, launched in 1952 (Jacobs, 2003; Quick, 2009). Throughout the rest of the 1950s and into the 1960s, medical shows featured a single, infallible, and omnipotent doctor that represented authority in the hospital and augmented public trust in the medical profession

(Hestroni, 2009; Jacobs, 2003; Quick, 2009). The doctors featured in shows such as *Medic* and *Dr. Kildare* regularly beat the odds and triumphed over illness to save their patients (Jacobs, 2003; Quick, 2009). An important historical note is that medical authorities, including the American Medical Association, issued their “stamp of approval” to these early medical dramas. It is hypothesized that professional organization’s perceived approval increased the public’s initial trust in the accuracy of medical dramas (Hestroni, 2009).

The Paternal Phase of medical dramas is a strong indicator of the medical environment in the United States in the 1950s. In 1951, sociologist Talcott Parsons released his seminal work, entitled The Social System, in which he offered a structural functionalist analysis of American society using medicine as a primary example (Cockerham, Lueschen, Kunz, & Spaeth, 1986). Parsons (1951) defined the “sick role” as passive and compliant. Sick persons were granted exemption from normal social performances and responsibilities. Additionally, sick persons were not to be held responsible for their illnesses; assistance beyond personal willpower and motivation was needed for the body to be cured (Parsons, 1951). Thus, the all-powerful, paternalistic doctor entered the picture to legitimize and cure the illness.

The Conflict Phase: Rebellious Spirit. From the early 1970s through the late 1980s medical dramas entered the Conflict Phase, which was marked by a shift from a *single* doctor to a *team* of healthcare providers, including surgeons, nurses, and administrators (Hestroni, 2009; Jacobs, 2003). While references to the medical profession remained almost entirely positive, the authoritative role of the physician shifted from consistently abiding by the rules to pushing the rules to their limits (Jacobs, 2003; Quick,

2009). Physicians were suddenly portrayed as practicing cutting-edge medicine, and while the outcomes were always successful, suspense was pervasive. The average site of healthcare shifted as well, from private clinic to public hospital. As such, audiences were introduced to internal and external conflicts faced by members of the healthcare team (Hestroni, 2009; Jacobs, 2003; Quick, 2009). Interestingly, medical dramas in the conflict phase also began featuring political turmoil of the times, featuring socially controversial topics including abortion and euthanasia (Hestroni, 2009; Jacobs, 2003).

The Apocalyptic Phase: Nihilism. In the early 1990s, patients' roles in medical dramas expanded beyond the exam room, and for the first time doctors started making mistakes that bore fatal consequences (Hestroni, 2009; Jacobs, 2003). Although the main setting of medical dramas remained large, public hospitals, the hospitals started resembling war zones as opposed to healthcare facilities (Hestroni, 2009; Jacobs, 2003). Apocalyptic physicians were often mean, unethical, insubordinate, and, for the first time, incompetent and wrong (Jacobs, 2003; Quick, 2009). The image of the courageous doctor persisted, but critical decisions did not always result favorably for the patient. Simultaneously, confidence in real-life healthcare institutions saw a drastic shift from paternalism of the 1950s to a 21st century consumerist mentality (Hestroni, 2009).

The consumeristic approach to healthcare aligns with DiMatteo's (1991) *mutual participation model*, which advocates the physician and patient making joint decisions at every step of the healthcare experience, from diagnostic studies to the choice and implementation of treatment. In this model, questions and concerns are voiced freely, provided both patient and provider practice clear and effective communication (Gordon & Edwards, 1997). In viewing "Apocalyptic" medical dramas, such as *ER*, audiences are

exposed to both the best of healthcare situations (e.g., mutual participation and beneficial outcomes) and the worst (e.g., unethical doctors making incompetent paternalistic decisions).

Despite the inconsistencies in realistic portrayals of healthcare, Bouman (2009) found that 88% of people in the US learn about health issues from television. Furthermore, the Kaiser Family Foundation (2006) found that over 40% of surveyed adults named traditional media (e.g., television, radio) as their primary source of health information. Another survey that asked the general public to choose the most highly attended source of health information found that television ranked second on a list of 16 sources that included various types of health care professionals (e.g., medics) (Hestroni, 2009). As a result of the public's dependency on popular media for health information, health organizations (e.g., The World Health Organization, Centers for Disease Control and Prevention) play a significant role in helping to educate the media by ensuring the accuracy and consistent flow of health information (Park & Reber, 2010).

One reason dependency on mass media for health information may be so high is because it allows the lay public to gather relevant information through *browsing* as opposed to *seeking*. Han (2009) defined seeking behavior as a “goal oriented, active, selective, and specific” means of acquiring information (e.g., searching “non-Hodgkin’s Lymphoma” on the internet) (p. 3). Information gathered in seeking-mode is processed more deliberately, and thus accessed content is usually better understood (Han, 2009).

Browsing behavior, on the other hand, occurs when information is encountered through “undirected, passive, and routine media use” (Han, 2009, p. 3). Browsing is more behavioral than cognitive, as much of what is learned through browsing occurs when

media content triggers the activation of secondary or long-term goals (Han, 2009). Furthermore, browsing allows individuals to “evaluate information of potential value and gain knowledge about the external world with minimal effort” (Han, 2009, p. 17). Therefore, although browsing is regarded as less relevant to decision making, it occurs significantly more often and thus has some influence over knowledge retention and future decision making (Han, 2009).

As millions of Americans are reached by nationally televised broadcasts, it is clearly a medium well-suited for disseminating health information (Jason, 1998; Kennedy et al., 2004). Unfortunately, health information gathered through television viewing must often be taken “with a grain of salt,” especially when the information comes from scripted television series as opposed to news stories. Fictional characters portrayed in medical dramas often become role models that teach the public about diseases and medical procedures, but the manner in which characters convey such information is intended largely to entertain, not educate (Han, 2009). Therefore, audiences who take medical dramas as reality may have a warped perception of the health care industry. In order to increase the positive impact of medical dramas, many health communication professionals are educating the producers of medical dramas about *entertainment education* and its use as a valuable tool for ensuring that fictionalized health representations benefit audiences by presenting as realistic portrayals of the health care industry as possible (Ye & Ward, 2010).

Entertainment Education

According to Ye and Ward (2010), entertainment education refers to “prosocial messages embedded in popular entertainment media that can have a positive impact on

awareness, knowledge, attitudes, and/or behaviors” (p. 560). This positive impact, if achieved, can affect both individual and social change among large audiences (Keller & Brown, 2002; Lee, Salmon, & Witte, 2009; Papa, Singhal, Law, Pant, Sood, & Rogers, 2000). Bouman (1999) emphasized entertainment education’s use of *theory based* strategy in “embedding educational and social issues in the creation and presentation of entertainment media . . . intended to increase audience members’ knowledge about a specific issue, [thus] creating favorable attitudes and promoting behavior change” (p. 25).

While there are numerous health-related messages communicated through entertainment media on a daily basis, only entertainment education messages are produced through theory and research (Bouman, 2009; Singhal & Rogers, 2002; Usdin, Singhal, Shongwe, Goldstein, & Shabala, 2004). Consequently the success of health-related entertainment education rests on the appropriate use of communication theory to change identifiable health beliefs, attitudes, and behaviors through the integration of planning, research, production, and evaluation (Bouman, 2009; Green, 2006; Singhal, Cody, Rogers, & Sabido, 2004; Usdin et al., 2004).

International health promotion program planners first started using entertainment education as a communication strategy in the 1950’s, as it is an effective tool for cost-effectively disseminating key facts about complex health issues to millions of people (Hether et al., 2008). Since the 1980’s, over 200 health-related entertainment education interventions have been implemented in the US (Lee et al., 2009). Examples of internationally successful health-oriented entertainment education programs include promoting family planning, sexual responsibility, and HIV/AIDS prevention through radio and television soap operas (Bouman, 2009; Brown, Kiruswa, & Fraser, 2005;

Japhet & Goldstein, 1997; Kincaid, Merritt, Nickerson, Buffington, de Castro, & de Castro, 1996; Piotrow & de Fossard, 2004; Rogers, Vaughn, Swalehe, & Rao, 1999; Valente, Kim, Lettenmaier, Glass, & Dibba, 1994) promoting safe sex and contraception through music videos, folk media, theater, and sporting events (Bunting & Brown, 2009; Brown & Cody, 1991; Coleman, 1988; Kemprecos, Storey, Jabre, Rimon, Khamis, & Wafai, 1994; Kim, Kumah, Piotrow, Morgan, Kotei, Ofori, Osae, & Obeng-Quaidoo, 1992; Kim & Marangwanda, 1997; Kincaid, Jara, Coleman, & Segura, 1988; Piotrow, Kincaid, Hindin, Lettenmaier, Kuscka, Silberman, Zinanga, Chikara, Adamchak, Mbizvo, Lynn, Kumah, & Kim, 1992), and promoting healthy diets and diabetes prevention through websites and interactive video games (Rogers, 2004). As there are no indications that the global expansion of entertainment media are subsiding anywhere in the foreseeable future, the use of entertainment education as a health communication strategy will continue to expand (Bouman, 2009).

In addition to the expansion of the production of entertainment media, there has also been an expansion in ways people around the world have access to such programs (Bouman, 2009). While radio still reaches a larger audience than all forms of visual media combined, the use of television for entertainment and socialization continues to be a primary source of influence around the world (Bouman, 2009). The internet is another resource which increasingly provides access to any form of entertainment streaming from anywhere in the world (Bouman, 2009). In the United States, previous research has demonstrated that the portrayals of health issues in medical dramas provide viewers with health information, shape viewers perceptions of healthcare professionals, illnesses, and

medical treatments and technology, and affect viewers health-related behaviors (e.g., preventative care) (Ye & Ward, 2010).

The production of entertainment education programs happens through one of four partnership arrangements with varying degrees of responsibility and control among partners (Bouman, 2009). In the first case, health organizations or educational institutions initiate collaboration with entertainment companies and media professionals to address relevant health issues; in this instance, heavily research-based messages are made more audience-friendly by adding dramatic appeal (Bouman, 2009). Responsibility and control on the part of the health communication professionals is sacrificed somewhat in favor of producing a more engaging and memorable message. In the second case, entertainment companies and media professionals seek out the health organizations or educational institutions to gain insight and information about a specific health issue; in this instance the media professionals may sacrifice some dramatic elements in order to produce a final product that is more educationally accurate (Bouman, 2009).

While these first two partnerships are highly collaborative, the second two are much less so; thus, the final product may be less educationally effective. In the third type of partnership, the media professionals value the creative process over all else: consequently, the information portrayed may be inaccurate or irrelevant to the audience. In the fourth case, the health communication professionals exercise complete control over the media professionals (e.g., through funding or deadline decisions); as a result the final product may lack the dramatic appeal necessary to gain audience attention and involvement (Bouman, 2009).

Fortunately, government and private institutions are shifting away from the third form of partnerships (e.g., Public Service Announcements) toward the first, more collaborative partnership (Lee et al., 2009). Research has shown that embedding campaign messages in existing serial dramas, sitcoms, and mini-series is as effective (or more effective) than paid advertising or public service announcements as embedded messages are likely to evade or suppress audiences' natural tendency to resist persuasive messages (Kennedy et al., 2004; Lee et al., 2009). According to Lee et al., (2009), with “seamless integration of information and diversion, entertainment education can circumvent audiences' perceptual defenses against persuasion” which are strengthened by traditional persuasion attempts such as public service announcements, web banner ads, or advocacy pamphlets (p. 2). Therefore entertainment education producers must be careful not to project overt entertainment education messages, as those messages perceived as a “hard sell” may induce audience resistance (Bouman, 2009).

According to Morgan et al. (2009), the influence of fictional medical dramas may be heightened by the fact that underlying storylines in many medical dramas mirror newspaper headlines; “it is no secret that scriptwriters draw inspiration from real-life situations” (p. 136). Therefore, one method of increasing the effectiveness of entertainment education is to embed timely storylines that trigger messages from real-life health campaigns (e.g., *Grey's Anatomy* featuring a character with breast cancer in October, which is “Breast Cancer Awareness Month” in the United States) (Green, 2006; Kennedy et al., 2004; Ye & Ward, 2010). Developing entertainment education programs in conjunction with real-life advocacy groups or health campaigns is beneficial for two reasons.

First, the media-saturated environment Americans experience on a daily basis could potentially dilute the effectiveness of an entertainment-education intervention (Green, 2006; Hether et al., 2008). However, viewers may be more motivated to seek out dramatic storylines as their messages are presented as entertainment rather than as persuasion (Green, 2006). By mirroring the messages of real-life health campaigns in medical dramas there is an increased likelihood that health-related messages will be attuned to and remembered. Second, entertainment-education offers the unique advantage of storylines that can be continued across several episodes (Hether et al., 2008) As such, entertainment-education has the power to keep health-related promotions and interventions in the mind of the public even after the news media has abandoned the topic.

Furthermore, Hether et al. (2008) found that an additive effect can be produced when viewers are exposed to multiple storylines with common themes across varied television programs. The varied representations of health care and health behaviors should benefit society in the sense that audiences can obtain a good amount of health knowledge, which may prove beneficial in health promotion (Ye & Ward, 2010). While entertainment education programs obviously run the risk of communicating negative health messages (due, at least in part, to health communication researchers lack of control over storylines), they do offer a potential advantage in their capability to model healthy behaviors through familiar characters that audiences grow to identify with over time (Hether et al., 2008).

In order to increase both the entertainment *and* education aspects of medical dramas, it is necessary for media professionals and health communication professionals

to creatively collaborate during production. Bouman (2009) found that this collaborative process was challenging, however, as media professionals and health communication professionals operate from very different frames of reference, a clash which threatens the production process and, as a result, the final product. While media professionals have been trained in a way that promotes creativity, originality, spontaneity, and individual authorship, health communication professionals have received scientific training which promotes observational skills and a systematic method of gathering and analyzing data, pursuing facts, testing assumptions, and making predictions (Bouman, 2009).

This profound difference in frames of reference may be rooted in more than training; Bouman (2009) also found evidence that media professionals and health communication professionals operate from different sides of the brain (p. 12). Media professionals dominantly operate from the right-brain mode which favors non-verbal, non-linear, intuitive, and perceptual elements of communication. Health communication professionals, on the other hand, dominantly operate from the left-brain mode which favors verbal, linear-logical, and syntactical elements of communication (Bouman, 2009). If media professionals and health communication professionals are able to successfully collaborate on the production of health-related entertainment education programming, the effectiveness of such interventions greatly increases as the information presented is both straightforward and accurate while remaining relevant and ambiguous; the elements of relevance and ambiguity are what keep the audience involved and force them to consider the issues being presented in their own sociocultural context (Bouman, 2009).

In explaining the effectiveness of entertainment education, there are several theories cited consistently throughout the literature, including Cultivation Theory (e.g.,

Hestroni, 2009; Quick, 2009; Ye & Ward, 2010) and Social Cognitive Theory (e.g., Hether et al. 2008; Morgan et al. 2009). Together, these two theories can be used to explain, in part, why the mass media has such a powerful effect on shaping the beliefs, attitudes, and values of viewers concerning the health care industry.

Cultivation Theory

Over the past three decades, Cultivation Theory researchers have demonstrated a moderate but consistent link between specific social judgments and television exposure based on television's ability to cultivate (Gerbner & Gross, 1976) or construct (Hawkins & Pingree, 1982) viewers' social reality (Busselle, 2001). The theory argues that "when people are exposed to a consistent set of messages, they incorporate information from their television viewing into their understanding of the world around them" (Brodie, Foehr, Rideout, Baer, Miller, Flournoy, & Altman, 2001, p. 192). Cultivation theory has been applied to a number of television genres including violence, romantic relationships, and healthcare in a number of different types of programming including soap operas, sitcoms, dramas, and mini-series' (Dutta, 2007).

Cultivation Theory offers "a theoretical background for the discussion of the influences of mass media on an individual's construction of life satisfaction judgments" (Ye, 2006, p. 5), and asserts that television viewing blurs our perception of the line between social reality and television reality, encouraging television audiences to adopt a repetitive and homogenous view of the world (Busselle, 2001; Quick, 2009; Van Mierlo, 2009; Ye, 2006; Ye & Ward, 2010). The extent of "blurring" is the result of the combination of several factors. First, Cultivation Theory researchers contend that patterns and representations of particular messages over an extended period of time strengthen the

viewer's belief in the portrayed television reality (Quick, 2009). The theory can thus be used to illustrate how a media-saturated environment enables the repetition of messages "especially at a thematic level, which may contribute to audience effects" (Hether et al., 2008, p. 809).

Second, researchers of Cultivation Theory have found that one's ability to distinguish between fiction and reality decreases as the amount of television watched increases (Hestroni, 2009; Hether et al., 2008; Quick, 2009). As a result, heavy television viewers are more likely to maintain societal perceptions that mirror television as compared to light television viewers (Quick, 2009). Third and finally, Cultivation Theory researchers contend that a cultivation effect is most likely in contexts in which audiences have limited real-world experiences (Quick, 2009).

When trying to understand cultivation learning, mass media scholars have traditionally investigated exposure, attention, and motivation (Dutta, 2007). While exposure and attention are consistently clear and exhausted indicators of knowledge gained from entertainment productions, the concept of motivation has received an increased amount of attention among mass-media scholars in recent studies (Dutta, 2007). Although individual differences exist that effect the ways individuals learn from media programs, motivation is a common trait among viewers (Dutta, 2007). According to Dutta (2007), "motivation leads to an individual's interest in a *particular* issue or topic, subsequently leading to active engagement in cognitions and behaviors related to the specific behavior or topic."

Cultivation Theory can be used to illustrate how the repetition of messages at a thematic level (e.g., health) may contribute to audience effects (Hether et al., 2008). Ye

(2006) found that individual genres (e.g., medical dramas) could have varying cultivations within a given population. While both overall viewing and genre specific viewing have been found to predict social judgments (Busselle, 2001), Shrum, O'Guinn, Semenik, and Faber (1991) found stronger correlations between television viewing and perception of relevant social reality within genre or type of television show than across genres (Ye, 2006). This evidence is especially meaningful when scholars consider that television viewers' "diets" usually consist of programs that fall within a limited number of genres (Ye, 2006).

Consequently, Cultivation Theory researchers are particularly interested in patterns and representations of particular messages over an extended period of time (Quick, 2009). On television today there is a vast array of content-driven motivations that direct information processing; motivation for understanding content in one domain does not necessarily transfer to other domains (e.g., health-oriented individuals are motivated to process health information, but not necessarily motivated to process sports information) (Dutta, 2007).

Furthermore, Cultivation Theory contends that one's ability to distinguish between fiction and reality decreases as the amount of television watched increases (Hestroni, 2009; Hether et al., 2008; Quick, 2009; Van Mierlo, 2009). According to Shrum (1996), "greater frequency and more recency of [television] viewing will cause instances of such things as violence to be more accessible in memory for heavy viewers than for light viewers" (p. 483). As a result, heavy television viewers are more likely to maintain societal perceptions that mirror television as compared to light television viewers (Quick, 2009; Ye, 2006). Those who watch amounts of television are therefore

more likely to estimate tendencies of certain groups that match the tendencies portrayed on television (Dutta, 2007). One reason for this trend may be that individuals who watch a greater amount of television have a proportionally larger number of examples available in memory (Busselle, 2001). The Availability Heuristic has been used by Cultivation Theory researchers to explain the importance of examples stored in individuals' memories (e.g., Busselle, 2001).

According to Busselle (2001), the Availability Heuristic tells us that “the magnitude of an estimate or judgment can be influenced by the ease with which information related to the judgment is retrieved from memory” (p. 44). Consequently, television is thought to “influence social judgments through a heuristic process” (p. 59). Busselle (2001) suggested two kinds of evidence in support of an availability heuristic underlying the exposure-judgment relationship: judgment latency and systemic conditioning. Judgment latency, measured by how long television viewers take to respond to a question, is an indicator of construct accessibility in that it eliminates the correlation between exposure and judgments (Busselle, 2001). Thus, those who regularly view medical dramas make more extreme judgments more quickly than those who do not regularly view medical dramas.

Systemic conditioning depends on whether television audiences are predisposed to believing that they are required to pay attention to and retain information presented through television (e.g., being told post-episode questions should be answered “spontaneously” vs. being told post-episode questions will be graded) (Busselle, 2001). Varying judgment tasks have been shown to elicit different heuristic mechanisms (Busselle, 2001). Overall, the relative ease with which an individual can picture an event,

retrieve a previous judgment, and access prototypes and examples all influence judgment of a given message (Busselle, 2001).

There is a high level of homogeneity among genre-specific television content as images and messages are created to correlate with the norms and values that are consistent with the largest population of society (Van Mierlo, 2009). As such, not all health-related storylines are successful at capturing and maintaining audience attention (Brodie et al., 2001). Choosing salient examples is one method of capturing audience attention that has received a particularly high amount of attention from Cultivation Theory researchers in recent years (e.g., Busselle, 2001; Dutta, 2007; Ye, 2006).

According to Busselle (2001), “the observation of specific examples can influence judgments” (p. 46). These specific examples have greater impact on social judgments than general television exposure, as they act as a “natural prime” and keep exemplified constructs readily available in the memory (Busselle, 2001). As repetition is the key to increased comprehension and long-term retention, picking issues relevant to the time is critical for audience information processing (Brodie et al., 2001; Ye, 2006).

Cultivation Theory and Medical Dramas. In the realm of health communication, researchers have used Cultivation Theory to explain patient underestimations of survival rate, overestimates of the incidence of mood disorders and “gory” injuries, and patient predispositions about medical doctors (Hestroni, 2009; Quick, 2009). Previous research has demonstrated evidence of a disparity between populations with respect to health knowledge, behaviors, attitudes, and beliefs. (Dutta, 2007; Ye, 2006). These disparities are primarily studied under “the rubric of health orientation, an individual difference variable that taps into consumer involvement in issues of health” (Dutta, 2007, p. 4), and

have been shown to consequently determine viewers' health orientation and life satisfaction (Busselle, 2001; Ye, 2006). Health orientation is based on the "degree to which an individual is willing to take care of his or her health" (Dutta, 2007, p. 4).

Demographically speaking, Cultivation Theory researchers have shown that sex, age, and health status of viewers are significant predictors of fear of illness (Van Mierlo, 2009). For example, Brodie et al. (2001) and Van Mierlo (2009) both found that girls, older adolescents, non-Caucasians, and viewers with poor health status were most likely to be afraid of illness. Interestingly, non-Caucasian adolescent viewers are also more likely to both report learning more health information from medical dramas and report that they would like to see more health issues covered on medical dramas (Brodie et al., 2001; Van Mierlo, 2009). According to Ye (2006), the more health oriented a person is, the more likely he or she is to perceive a better life condition, and thus have higher life satisfaction. This trend holds across various types of health programming on television, including news reports, talk shows, sitcoms, and dramas (Dutta, 2007).

In considering that higher levels of television consumption leads to a blurrier line between social and television realities, it is vital to consider which populations watch more television. Mosalenko and Heine (2003) found that individuals who receive failure feedback (threats to the self) in the real world were more likely to watch television than those whose lives were more consistent or stable. This trend, thought to be the result of television's ability to reduce self-discrepancy among viewers, is highly applicable to health communication and medical dramas as changes in health status are often perceived as threats to the self.

Finally, cultivation researchers in the health communication field further contend that a cultivation effect is most likely in medical contexts where audiences have limited experiences (Quick, 2009). For instance, Hestroni (2009) reported that over 70% of survey respondents admitting acquiring a majority of their knowledge about emergency medicine from watching hospital dramas.

Social Cognitive Theory

Social Cognitive Theory implies that television audiences can learn knowledge, attitudes, and behaviors through observing the relevant performances of others in various contexts (Hether et al., 2008). The degree to which individuals acquire knowledge, form attitudes, and model behaviors from television is dependent on several factors, including motivation (Green, 2004; Hether et al., 2008; Quick, 2009), character identification (Green & Brock, 2000; Prentice, Gerrig, & Bailes, 1997; Slater, 1990), and perceived realism (Strange & Leung, 1999; Wheeler, Green, & Brock, 1999). Therefore, not all audience members are influenced by a particular performance or storyline in the same way (Hether et al., 2008).

Social Cognitive Theory posits individuals are motivated to observe, and subsequently model, the attitudes and behaviors of others under particular conditions (Morgan et al., 2009; Rosenstock, Strecher, & Becker, 1988). In order for social learning to take place, then, individuals must attend to and remember the modeled behavior. According to Morgan et al. (2009), “the extent of narrative appeal is dependent on storyline appeal, production quality, and the unobtrusiveness of educational messages” (p. 147). Highly absorbing narratives provide a perfect condition to enhance attention to modeled behaviors and subsequently motivate viewers to adopt such behaviors (Morgan

et al., 2009). Morgan et al. (2009) found that “emotional involvement in a narrative increases attention to the story elements, the amount of imagery viewers generate, and increases cognitive processes” (p. 137).

Perceived realism of a narrative is measured by both “an individual’s tendency to perceive and encode media content as realistic . . . [and] the judged realism of content after it is recalled” (Busselle, 2001, p. 61). Differences in perceived realism are related to individuals’ social judgments as opposed to the messages themselves, and as such not all viewers share the same perceptions about the degree of reality present in a given program (Busselle, 2001; Potter, 1986). Potter (1986) found that differences in perceived realism are weakly but consistently related to several demographic characteristics including race and age. For instance, minorities tend to perceive television programs as more realistic than whites, younger children tend to perceive television programs as more realistic than older children, and older adults tend to perceive television programs as more realistic than younger adults (Potter, 1986).

Similarly, perceived realism can increase attention to story elements, the amount of imagery generated, and increase cognitive awareness, thus increasing the impact of the narrative (Morgan et al., 2009). Morgan et al. (2009) found that high perceived realism of television content can lead to positive attitude change. More positive attitudes operate to increase learning and motivation on the topic, thus increasing the impact of the narrative on the viewer. Television viewers who perceived content as realistic were more likely to be influenced than those who found content to be overly fictional or stylized, thus increasing their level of emotional involvement in the narrative (Potter, 1986). Interestingly, Busselle (2001) discovered that while perceived realism may influence

social judgments directly, it may also interact with other factors (e.g., personal health status) to influence social perceptions.

Potter (1986) identified three dimensions of perceived reality: Magic Window, Instruction, and Identity. First, the Magic Window dimension is “the degree to which a viewer believes television content is an unaltered, accurate representation of actual life” (Potter, 1986, p. 161). The name “Magic Window” alludes to the childlike belief that television presents truthful pictures of the world. Individuals at the high end of the Magic Window dimension maintain this belief throughout their lives, accepting television entertainment programming as “realistic representations of the way people behave and the way events occur” (Potter, 1986, p. 162).

Conversely, it is assumed that with age comes reason, and as such adults are thought to develop a type of “discounting mechanism” that allows them to put television in a “fantasy perspective” that subsequently minimizes television’s effect on them (Potter, 1986). At the low end of the Magic Window dimension are those who view television entertainment programming as a “highly stylized form of communication that presents fantastic settings and characters which are very different from real life” (Potter, 1986, p. 162). Those who view television entertainment programming in the low end of the Magic Window dimension are likely to acknowledge that program content is presented as a way for viewers to escape their mundane surroundings (Potter, 1986).

Second, the Instruction Dimension encompasses viewers’ confidence in television as an instructional aide which alters and increases the impact of their direct experiences (Potter, 1986). Individuals at one extreme hold television programming (both factual and fictional) as a useful “roadmap” of problems and solutions. At the other extreme are

individuals who watch television strictly for entertainment; these individuals view fictional television programs as distorted and unrealistic. As a result, they make no effort at comparing episodic situations to their own lives (Potter, 1986).

Finally, the Identity Dimension is “the degree of similarity the viewer perceives between television characters and situations and the people and situations experienced in real life” (Potter, 1986, p. 163). This dimension holds that people who identify with role models are more likely to be influenced by the behaviors, beliefs, and attitudes of those models than those who do not experience a strong feeling of identification (Potter, 1986). Thus people who are high on the Identity Dimension consistently find similarities between television characters and people they encounter in their own lives (Potter, 1986). Identification with characters is a fundamental psychological process that plays a crucial role in narrative impact, and has been emphasized as the central process through which the media can effectively persuade an audience (Lee et al., 2009; Oatley, 2002; Slater & Rouner, 2002).

Social Cognitive Theory and Medical Dramas. Medical dramas create a potentially excellent condition to enhance attention and memory (Morgan et al., 2009; Quick, 2009). The wider the array of illnesses, diseases, and related matters (e.g., diagnoses, treatments) represented, the larger the memory bank individual’s have to pull exemplars from when faced with novel situations (Ye & Ward, 2010). However, in order for individuals to benefit from social cognition, they must be motivated to remember knowledge or suggestions offered through medical dramas. Health communication researchers have produced several models that are pivotal to understanding motivation, including health self-efficacy, locus of control, and the Health Belief Model.

First, health self-efficacy is a situation-specific phenomenon that is dependent on one's personal beliefs about their ability to manage their health in specific settings (Rosenstock et al., 1988). According to Bandura (1986), individuals who possess high levels of health self-efficacy believe that they can manage their health successfully. Individuals with high self-efficacy are more likely to maintain healthy lifestyles, a practice which, as justified by Cultivation Theory, generally leads to higher life satisfaction (Bandura, 1986). According to Rosenstock et al. (1988), health self-efficacy information is derived from four sources: performance accomplishments, vicarious experience, verbal persuasion, and physiological states. In addition to these four sources, Bandura (1986) would likely have added Locus of Control to the list of sources of self-efficacy.

Performance accomplishments are the most influential of the four sources of health self-efficacy as they are based on the individuals' prior experiences (Bandura, 1986; Lee et al., 2009; Rosenstock et al., 1988). For example, a diabetic individual whose medication regimen is altered is likely to feel confident in their ability to manage the new regimen based on the fact that they have done it in the past.

Vicarious experiences are the next most influential sources; these experiences are obtained through observing "role models'" successes or failures in dealing with health experiences (Bandura, 1986; Lee et al., 2009; Rosenstock et al., 1988). Examples that could affect health self-efficacy levels include coping with death, suffering through rehabilitation, or reaching out for support. Media characters may serve as salient role models, counselors, or comforters by offering recommended responses for individuals facing new or intimidating health-related situations (Lee et al., 2009)

Verbal persuasion (also referred to as exhortation) is the third source of health self-efficacy. When offered alone, verbal persuasion is significantly less powerful than performance accomplishments and vicarious experiences; however, it can be a useful adjunct to the more powerful influences (Rosenstock et al., 1988). For instance, a role model who exhibited a great amount of success in dealing with a cancer diagnosis could increase the health self-efficacy of a newly diagnosed patient by bolstering their vicarious experience with verbal persuasion.

Experienced physiological states are the fourth source of health self-efficacy. An individual's physiological reaction to health information may inform him or her about whether they are capable of performing a given action (Rosenstock et al., 1988). For example, an individual who initially feels a great deal of anxiety may increase their health self-efficacy by reducing their anxiety level through relating the new experience back to previous challenges that they have overcome.

Locus of Control is a generalized concept about the self that stems from an individual's cultural beliefs (Bandura, 1986; Marks, 1998; Rosenstock et al., 1988). Individuals with an *internal* locus of control reflect the opinion that personal behavior determines health outcomes, while individuals with an *external* locus of control are more likely to view health outcomes as fatalistic, and thus rarely attempt to exercise influence over what is often considered "God's Will" or one's "destiny" (Marks, 1998; Rosenstock et al., 1988). For example, upon being diagnosed with diabetes, a patient with an *internal locus of control* would likely adopt recommended lifestyle behavior changes including diet, exercise, and regular blood level checks. A patient with an *external locus of control*, however, may find changing their lifestyle to be unnecessary as they are unlikely to

believe that they have any control over their diabetes regardless of how hard they try (Bandura, 1986; Marks, 1998; Rosenstock et al., 1988).

The Health Belief Model, created by Lewin, Dembo, Festinger, and Sears (1944) over 60 years ago, is a theoretical framework based on a value-expectancy model that is continually applied in health communication research today. Initially, Lewin et al. (1944) explained that values attributed to an outcome influence whether a person will strive for that goal. The required actions are evaluated in light of the individual's expectations that he or she will succeed. Actions perceived as likely to succeed are optimally internalized and incorporated into the person's daily life. This internalization is the key of the Health Belief Model: mere awareness of health threats is not enough to change behavior – individuals must internalize the desired behavior and believe they can “own” their own health. Thweatt & Query (2005) stated that the three main dimensions of the Health Belief Model which shape many health care decisions are perceived susceptibility, benefits and barriers, and internal and external cues. Individuals must be motivated to accept perceived susceptibility, overcome barriers, and attend to internal and external cues.

Medical drama narratives create a potentially excellent condition to enhance attention and memory (Morgan et al., 2009; Quick, 2009). The wider the array of illnesses, diseases, and related matters (e.g., diagnoses, treatments) represented, the larger the memory bank individuals have to pull exemplars from when faced with novel situations (Ye & Ward, 2010). Mosalenko and Heine (2003) found that individuals who receive failure feedback (threats to the self) in the real world were especially likely to watch television narratives. This trend is thought to be the result of television's ability to

reduce self-discrepancy among viewers, a result that is highly applicable in the health care arena (Green, Brock, & Kaufman, 2004), as new diagnosis can be one of the most traumatic threats to the self that an individual may ever face. Furthermore, audiences must be educated enough to draw their own conclusions about the best course of action in order to maximize the success of health interventions (Bouman, 2009).

Medical Education Reform and Medical Dramas

Through Cultivation and Social Cognitive Theories, health communication researchers have gained a clearer understanding of *how* patient expectations are shaped by medical dramas. As a result of this influence, analyzing scripted medical dramas for elements of universal skills and guidelines in physician-patient communication instruments could provide a clearer picture of *what* patients expect to experience during medical encounters. While several studies have analyzed aspects of medical dramas including frequency of diagnoses, survival rates, and character demographics (e.g., Hestroni, 2009; Ye & Ward, 2010), none of these has examined the way in which modern medical dramas portray medical education reform efforts aimed at improving physician-patient communication. Therefore, the current study seeks to discover how physician-patient communication reform is reflected in modern medical drama.

CHAPTER III

PROCEDURES

Sample

The data for this analysis was drawn from episodes of *Grey's Anatomy* that aired between September 25, 2008 and May 20, 2010 (seasons five and six). Seasons five and six were chosen as they were the two most recent seasons currently available on DVD. Of the 46 episodes that aired during the chosen time period, 20 were randomly selected for analysis using a random number generator. In the event that one of the episodes chosen was part of a multiple-part episode, all episodes from the series were analyzed. The number of episodes chosen was based on Manganello, Franzini, and Jordan's (2008) report that sampling seven episodes from a television season was an adequate amount to draw character-based conclusions. In comparison to this suggestion, this study reflects a slightly more aggressive and comprehensive approach, similar to the approach used by Ye and Ward (2010).

Grey's Anatomy was chosen for several reasons. First, according to the Nielsen Company (2010), *Grey's Anatomy* is currently the top-ranked medical drama on television, reaching over 8.5 million households during the 2008-2009 season. Second, *Grey's Anatomy* takes place at the fictional Seattle Grace Teaching Hospital (ABCa, 2010). Using a teaching hospital for analysis is logical as the aim of the study is to identify communication reform in medical school. As the cast of *Grey's Anatomy* is largely made up of surgical interns and residents, the characters represent M.D.s who are

fresh out of medical school (see Appendix A). As a result, the physician-patient communication should have portrayed medical school communication education reform if the interactions were consistent with medical school training. Finally, in addition to being popular among viewers, *Grey's Anatomy* has also received critical acclaim, including the 2007 Golden Globe for Best Television Series – Drama, and multiple Emmy nominations, including two for Outstanding Drama Series (ABCa, 2010).

Method Justification

The data collection methodology employed in this study was manifest and latent content analysis combined with elements of qualitative theme analysis. In other words, the researcher used content analysis to identify elements of an established measure of communication (the Common Ground Instrument), and then moved to thematic analysis as a means of assessing entire themes and ideas (as opposed to individual words and sentences, as is typical of a true content analysis). Below I provide details of the analysis process.

Manifest Content Analysis. Manifest content refers to “that which is explicitly stated” (Clarke & Binns, 2006, p. 41), or “those elements that are physically present and countable” (Berg, 1989, p. 107). This deductive form of reasoning has two advantages. First, manifest content analysis allows for the evaluation of unstructured material (Krippendorff, 1980). While communication evaluation instruments are easily applied to medical students’ interactions with standardized patients, the application becomes more complicated when considering dramatized, fictionalized interactions. Physician-patient interactions in medical dramas vary widely in terms of length, setting, symptoms, diagnoses, and treatment (Ye & Ward, 2010). Therefore, analyzing the manifest content

of these interactions will provide a more accurate list of themes than attempting to evaluate them using a standardized instrument. First, content analysis can be used to describe trends in communication content (Berelson, 1952).

Latent Content Analysis. Latent content refers to “the underlying, implicit meaning in the content of a text” (Neuman, 2000, p. 296). Latent analysis is an inductive form of reasoning (Clarke & Binns, 2006); thus, understanding is derived *from* data as opposed to data coming from supposed understanding (in the form of preconceived hypotheses) (Krueger & Casey, 2000). As a result of induction, researchers may uncover hidden themes or factors that they would not have known to test for manifestly.

Latent content analysis also allows the researcher to achieve *saturation* of themes. According to Krueger and Casey (2000), saturation is the point at which researchers have heard the breadth of themes offered in a data set and are not receiving new information. When saturation is achieved, researchers can feel confident that they have uncovered all themes relevant to a concept and can pose conclusions. Evaluating manifest themes may leave researchers unsure of whether the full breadth of themes has been studied.

Additionally, latent content analysis is context sensitive (Krippendorff, 1980). Were the interactions between physicians and patients being analyzed quantitatively, the data would be disassociated from the symbolic meanings the responses may have had for the individuals involved. Since the contexts in which medical interactions take place vary extraordinarily, it is important to keep the communication and the context in which it took place linked inextricably from one another.

Finally, Berelson (1952) posited 17 uses for content analysis, four of which are very relevant to latency. First, latent content analysis can be used to discover stylistic

features. Second, it can be used to identify the intentions and other characteristics of each communicator. Latent content analysis can also reflect attitudes, interests, and values of the population groups (e.g., cultural patterns). Lastly, latent content analysis can be used to describe attitudinal and behavioral responses to communication, including observations of such things as the *absence* of particular themes (Clarke & Binns, 2006).

Qualitative Thematic Analysis. In addition to manifest and latent content analysis, this study employed elements of a qualitative theme analysis. While the present unitization and coding were indicative of a true content analysis, using a single coder without reliability coding is indicative of a qualitative theme analysis. Furthermore, as the researcher assessed entire themes and ideas as opposed to the coding of individual words and sentences, this thesis borrowed from qualitative methodology in order to use a standardized instrument to assess a television program.

Unit of Analysis

The primary unit of analysis was a significant, medically-oriented interaction between a resident or attending physician and a patient. To qualify as significant, the interaction had to have lasted at least two minutes, and must have been critical for the development of the plot. Physician-patient interactions that lasted less than two minutes, concerned matters other than the patient's health, and/or were not involved in the central plot of the show were not coded. Decisions regarding significance are based on Ye and Ward's (2010) analysis unit justification.

Coding Procedure

Each significant communication interaction was viewed three times by the researcher. First, the researcher viewed the entire episode, taking notes about which

interactions met the criteria for evaluation. In the second viewing, the researcher transcribed the communication between the physician and the patient. In the final viewing, the researcher took notes on the context of the interaction, any subtle verbal intonations, and any nonverbal symbols. Next, each of the significant interactions were coded as present or absent following the manifest skills cited in the Common Ground Instrument, a standardized evaluation tool created by Lang et al. (2004).

Based on communication skills specified in the Kalamazoo and Toronto Consensus Statements, the Common Ground Instrument is used to evaluate six core communication skills employed during medical students' interactions with standardized patients (Lang et al., 2004). The Common Ground Instrument has been found to be a valid, reliable, and generalizable means of assessing the successful completion of the six skills on a scale of one (very successful) to five (not at all successful) (Lang et al., 2004). The following six skills were coded in each interaction: (1) rapport building, (2) agenda setting, (3) information management, (4) active listening, (5) addressing feelings, and (6) negotiation to reach a common ground. As the researcher was not trained to evaluate the degree of success of each of the six skills, the current study sought only to identify whether or not the six skills were present in the interactions.

Following coding of manifest themes, the researcher analyzed each of the interactions searching for latent themes. As the nature of latent content analysis allows for inductive reasoning and contextual consideration, the researcher uncovered several latent themes within each of the six skills that accounted for the presence or absence of a skill in a given interaction. Each of the latent themes reached saturation.

Rapport Building. Establishing a strong, therapeutic, and effective relationship between physician and patient is the fundamental communication task (Brunett et al., 2001). In building rapport, physicians should allow the patient to complete his or her opening statement and elicit his or her full set of concerns (Brunett et al., 2001). Additionally, physicians must elicit the patients' stories of illness and be aware to the ideas, feelings, and values being conveyed through the story. Successful rapport building will establish a *partnership* between the physician and patient that will determine the success of communication throughout the rest of the interaction (Brunett et al., 2001).

In order to determine whether rapport building was present or absent, the researcher coded rapport status at the end of the interaction. Where rapport building was deemed present, the researcher recorded who initiated the rapport building. When initiated by the physician, the researcher recorded whether the patient responded with medical or personal rapport. When initiated by a family member of the patient, the researcher recorded whether rapport was established through the family member or at the expense of the family member. Where rapport building was deemed absent, the researcher recorded whether rapport failed due to a focus on medicine, lack of physician respect for the patient, or lack of physician interest.

Agenda Setting. Effective agenda setting has been shown to improve time management during physician-patient interactions, a crucial step in improving communication outcomes (Yedidia et al., 2003). By frequently summarizing, physicians are able to effectively prioritize patient complaints and concerns (Lang et al., 2004). As a result, physicians can use saved time to continue exploring patients' illness experience until the topic has been exhausted.

In order to determine whether agenda setting was present or absent, the researcher coded the entire interaction between the physician and the patient. Where agenda setting was deemed present, the researcher recorded whether the agenda concerned the desired surgical outcome or the desired surgical process. Where agenda setting was deemed absent, the researcher recorded whether agenda setting failed due to characteristics of the physician, the location of the first interaction, or the situation being “touch-and-go” in nature. In “touch-and-go” situations, cases were recorded as either misunderstood or rapidly deteriorating.

Information Management. Physicians who excel at information management use open- and close-ended questions appropriately, use non-directional facilitation techniques, and summarize information as it is presented (Simpson et al., 1991). As physicians are eliciting agenda items from patients, it is crucial that they structure and clarify information that is offered (Brunett et al., 2001). Inappropriate use of close-ended questions, leading questions, and repetitive questions, and offering untimely advice or reassurance are all hindrances to effective information management.

In order to determine whether information management was present or absent, the researcher coded the entire interaction between the physician and the patient. Where information management was deemed present, the researcher recorded whether the physician’s attempt to manage information was reciprocated by the patient’s family member or the patient him or herself. When reciprocation was carried out by the patient, the researcher coded whether information provided was medical or personal in nature. Where information management was deemed absent, the researcher recorded whether the

absence was the result physician characteristics (e.g., disinterest, lack of effort) or the result of a lack of agenda setting.

In evaluating information management, the researcher coded whether information managed concerned the patient's symptoms, physical condition, emotional needs, or satisfaction with care. Each of these four areas was further coded as having been established through either active questions or passive statements.

Active Listening to Understand the Patient's Perspective on the Illness. Lang, Floyd, and Beine (2000) stated that active listening consists of "utterances and/or behaviors that are not explicit but may have special meaning and suggest unshared ideas, concerns, and expectations" (p. 222). Brunett et al. (2001) further posited that active listening includes both verbal (e.g., words of encouragement) and nonverbal (e.g., eye contact) feedback as patients are speaking. Active listeners acknowledge and respond to patient concerns, emotions, beliefs, and expectations (Simpson et al., 1991). By practicing active listening, physicians are able to identify the patient's perspective on illness; the patient's perspective on the illness can include what the patient thinks is going on, their greatest concerns about potential problems, and their expectations for the visit (Lang et al., 2004).

In order to determine whether physicians understood the patient's perspective on the illness or not, the researcher coded the entire interaction between the physician and the patient. Where understanding was deemed present, the researcher coded whether understanding was achieved through active listening or passive observation. When understanding was achieved through passive observation, the researcher coded whether the physician understood the patient's perspective through the participation of the patient

or through the participation of their family member(s). Further, passive observation led to understanding through the participation of a family member, the researcher coded whether the family member acted to “rehash” the patient’s illness experience or simply engaged in conversation with the patient in the presence of the physician.

Regardless of the method through which understanding was achieved, the researcher coded the physician’s actions following their understanding of the patient’s perspective: normalization and legitimization, normalization without legitimization, or demeaning, devaluing, and/or dissuading. Additionally, the researcher coded whether physicians internalized or explored clues offered by the patient.

Addressing Feelings. In relaying their illness experiences, patients express a vast array of feelings and emotions. According to Groopman (2008), patients’ stories of illness experiences can grant physicians huge breaks in solving health problems, provided that physicians know how to effectively address feelings that are presented. Addressing feelings includes acknowledgment, normalization, and/or legitimating on the part of the physician, thus increasing the flow of information offered by the patient (Lang et al., 2004; Simpson et al., 1991). By ignoring patient feelings, physicians may give the impression that such feelings do not matter. As a result, potential diagnostic clues could be missed (Groopman, 2008).

In order to determine whether or not physicians addressed patients’ feelings, the researcher coded the entire interaction between the physician and the patient. Where feelings were addressed, the researcher coded the physician’s actions following the addressing of feelings: normalization and legitimization, normalization without legitimization, or demeaning, devaluing and/or dissuading.

Where feelings were not addressed, the researcher coded whether the absence was a result of protection against a “trade-off,” the fact that feelings were expressed to others merely in the *presence* of the physician, not to the physician him or herself (e.g., family members, close friends), or physician bias. When physician bias was identified as the cause of a physician’s failure to address feelings, it was coded as a lack of respect, a lack of interest, the result of perceived futility, or the fact that patient consent was considered unnecessary for the surgical procedure to commence.

The presence of warmth in the physician’s demeanor was also coded for. According to Caris-Verhallen, Kerkstra, and Bensing (1999), warmth is conveyed nonverbally through prolonged eye contact, affirmative head nodding, smiling, forward leaning, and expressive touch. Verbally, warmth can be conveyed through appropriate reassurance, advice, and sympathetic comments (Brunett et al., 2001). Where warmth was deemed present, the researcher coded whether warmth was exhibited in the initial interaction between the physician and the patient, or in subsequent interactions as a method of maintaining or strengthening the relationship.

Negotiation to Reach a Common Ground. Once a physician has successfully enacted the previous five communication skills, the interaction with the patient should conclude in the same partnership-oriented manner that was sought throughout the communication episode. In the concluding phase, physicians and patients must work together to reach mutually beneficial conclusions (Simpson et al., 1991). Patients should be included in treatment decision making as much as they are comfortable doing so; patient willingness and ability to follow plans are crucial (Simpson et al., 1991). Other important aspects of negotiation include brainstorming, compromising, agreeing on

follow-up plans (e.g. next visit, planning for unexpected outcomes), and identifying and enlisting resources and support networks (Brunett et al., 2001; Lang et al., 2004; Simpson et al., 1991).

In order to determine whether negotiation was present or absent, the researcher coded common ground achieved at the end of the interaction between the physician and the patient. Where common ground was deemed present, the researcher coded which of four effective skills was centrally employed. When reframing was the central means of negotiation, the researcher coded whether the physician reframed the patient's view on life, or the rationality of the patient's emotions. When patient-centered interaction was the central means of negotiation, the researcher coded whether the physician communicated or the physician acted in patient-centered manner.

When decision analysis was the central means of negotiation, the researcher coded whether the patient's case had a clear surgical outcome, or whether the surgery was "touch-and-go." Finally, the researcher coded whether the physician used brainstorming as the central means of negotiation. Where common ground was deemed absent, the researcher coded whether the absence was the result of the physician's failure to understand the patient's perspective, or whether the absence was the result physician characteristics (e.g., lack of effort, lack of interest).

CHAPTER IV

RESULTS

Including episodes that made up multi-part series', 23 episodes of *Grey's Anatomy* were analyzed (see Appendix B). In the 23 episodes, the researcher identified 38 significant, medically-oriented interactions between an intern, resident, or attending physician and a patient (see Appendix C). Using a combination of latent content analysis and qualitative thematic analysis, themes and sub-themes within rapport building, agenda setting, information management, active listening to establish the patient's perspective on the illness, addressing feelings, and negotiation to reach a common ground were identified (see Appendix D).

Rapport Building

Successful rapport building, or the establishment of a *partnership* between the physician and the patient (Lang et al., 2004), occurred in 70% of the interactions between a physician and a patient (n=27). Attempts at rapport building failed in the remaining 30% of the interactions (n=11). Successful rapport building was initiated by one of three parties: the physician, a family member or close friend of the patient, or by the patient him or herself.

Physicians initiated rapport building 59% of the time (n=16), and succeeded 100% of the time (n=16). While the physicians' attempts at rapport building were always based on medicine (e.g., finding out how the patient received an injury, understanding the implications of an illness of the patient's life), physicians were only met with medically-

oriented responses 50% of the time (n=8). In the remaining 50% of responses, patients redirected conversations to focus on relationship and family issues that existed separate from the illness or injury (n=8).

Family members or close friends of the patient initiated rapport building 26% of the time (n=7), and also succeeded 100% of the time (n=7). Family members acted in one of two ways. First, in 57% of attempts, rapport was established at the expense of a family member as opposed to as a result of their intentional influence (n=4). In the remaining 43% of rapport building attempts, family members acted as a link between the physician and the patient to help establish meaningful rapport (n=3).

Finally, patients initiated rapport building on 15 occasions, yet they only succeeded 26% of the time (n=4). Reasons for sporadic rapport building were the consequence of the physician, and included physician attempts at keeping the focus of communication on the medicine, lack of physician respect for the patient, and lack of physician interest in the case. Of the 11 failed patient attempts, 45% were rejected by physicians due to the fact that the initial attempt revolved around the patient's personal life rather than the medical implications of the interaction (n=5). An additional 36% of patient attempts were rejected by physicians because the physicians did not respect the patients (n=4). The final 18% of attempts were rejected by physicians because the physicians were not interested in the case (n=2).

Agenda Setting

Successful agenda setting, or summarizing patient complaints and concerns (Lang et al., 2004), occurred in 50% of interactions between a physician and a patient (n=19). There were two types of agendas successfully explored by physicians: outcome agendas

and process agendas. Outcome agendas were set 63% of the time (n=12), while process agendas were set the remaining 37% of the time (n=7).

Agenda setting was unsuccessful in the other 50% of interactions between a physician and a patient (n=19). There were three circumstances that explain the absence of agenda setting: including “touch-and-go” patient conditions, location of first interaction (Emergency Department or an inpatient room), and characteristics of the physician.

“Touch-and-go” patient conditions made up 42% of the total failed agenda setting interactions (n=8). “Touch-and-go” situations can be separated into two categories: patient conditions that are not well understood, and rapidly deteriorating patient conditions. Patient conditions that were not well understood were the cause of failed agenda setting in 75% of failed attempts (n=6), while rapidly deteriorating patient conditions were the cause 25% of the time (n=2). Second, physician characteristics made up 37% of total agenda setting failures (n=7). Finally, location of first visit determined the last 21% of agenda setting failures (n=4).

Information Management

Successful information management, or summarizing information regarding agenda items as it is presented (Lang et al., 2004), occurred in 55% of the total interactions between a physician and a patient (n=21). All successful attempts at information management were initiated by the physician, and were reciprocated by either the patient themselves or a family member or close friend of the patient. Physicians’ attempts at information management were reciprocated by patients 86% of the time (n=18). Of those 18 successful attempts, physicians managed *medical* information with

patients 67% of the time (n=12), while they managed *personal* information the remaining 33% of the time (n=6). Physician's attempts at information management were reciprocated by a family member or close friend of the patient 14% of the time (n=3).

Regardless of the status of the reciprocator, physicians successfully managed information in two ways: actively asking questions and passively making statements. Physicians actively managed information on 181 occasions. Information was managed by asking questions 34% of the time (n=62), while they passively the remaining 66% of the time (n=119). Both questions and statements fell into one of four themes. The most commonly occurring theme was the patient's *emotional needs*, which were gauged in 92% of the coded interactions (n=35). Emotional needs made up 38% of total information management attempts (n=69). Of those attempts, 20% were gauged using questions (n=14), while 80% were gauged using statements (n=55).

The second most commonly occurring theme was the patient's *physical condition*, which was measured in 79% of the coded interactions (n=30). Physical condition made up 31% of total information management attempts (n=56). Of those incidences, 20% sought information using questions (n=11), while 80% sought information using statements (n=45). Third, physicians managed information about *patient satisfaction* in 58% of coded interactions (n=22). Physicians attempted to measure patient satisfaction in 18% of the instances of information management (n=33). Of those attempts, 55% were made using questions (n=18), while 45% were made using statements (n=15). Finally, physicians managed information about *symptoms* in 34% of coded interactions (n=13). Symptoms made up 13% of total information management attempts (n=23). Of those

attempts, 83% were made using questions (n=19), while 17% were made using passive statements (n=4).

Information management was unsuccessful in 45% of the total interactions between a physician and a patient (n=17). Reasons for failed information management included lack of agenda setting and physician disinterest in the case. Lack of agenda setting accounted for 65% of total failed opportunities for information management (n=11). Physician disinterest in the case coupled with a lack of physician effort were to blame in the remaining 35% of failed opportunities (n=6).

Active Listening to Understand the Patient's Perspective on the Illness

Despite the inconsistent completion of the previous three skills, physicians successfully understood their patients' perspectives on their illnesses and injuries 95% of the time (n=36), while misunderstanding only 5% of the time (n=2). Successful understanding was achieved in two ways: passive observation and active listening. While the Common Ground Instrument stresses the importance of using active listening to establish the patient's perspective (both verbal and nonverbal feedback as patients are speaking) (Brunett et al., 2001), the physicians in *Grey's Anatomy* used passive observation as a means of successfully understanding the patient's perspective on the illness or injury 75% of the time (n=27). The effectiveness of passive observation was dependent on both patient participation and on the participation of the patient's family members and friends.

Patients provided information and clues without being prompted in 33% of the total cases where success was achieved through physicians' passive observation (n=9), while family members and close friends provided information and clues 67% of the time

(n=18). There were two ways that friends and family members were able to elicit a patient's perspective on their illness. First, family members and friends rehashed the patient's illness experience to the physician on behalf of the patient; this "rehashing" of the patient's perspective resulted in physician understanding in 55% of the total times family members and friends influenced physician understanding (n=10). Second, physician understanding was gained *through* patient's conversations with family members and close friends; this observational understanding influenced physician understanding in the remaining 45% of times family members and friends influenced physician understanding (n=8).

Physicians in *Grey's Anatomy* used active listening as a means of successfully understanding the patient's perspective on the illness or injury 25% of the time (n=9). The first step in successful active listening was the acknowledgment of patient clues. When physicians identified patient clues, there were two options for action: internalization or exploration.

Of the 38 instances in which patient's clues were used by physicians, the clues were internalized 76% of the time (n=29). When physicians felt confident enough that they understood the patient's clues that they did not have to explore them further, they were correct in their assumptions 93% of the time (n=27). On the other hand, physicians chose to actively explore clues provided by patients 24% of the time (n=9). When physicians explored clues actively, they correctly interpreted patient clues 100% of the time (n=9).

When a physician was able to successfully establish a patient's perspective on their illness or injury, the physician was left to decide whether to encourage or discourage

the patient's perspective. The first step in encouraging the patient's perspective on the illness or injury was normalization, which happened in 75% of total cases (n=27).

According to Lang et al., (2004), the next step in encouraging the patient's perspective is legitimizing the perspective by incorporating it into a plan of treatment. Legitimization followed normalization 66% of the time (n=18), while legitimization did not follow normalization 44% of the time (n=9). In the 25% of cases that were not legitimized (n=9), the patient's perspective was demeaned, demoralized, or devalued by the physician.

Addressing Feelings

As with all skills cited in the Common Ground Instrument that have been explored thus far, physicians in *Grey's Anatomy* were largely inconsistent with whether or not they chose to address feelings expressed as patients relayed their illness experiences. Of the 38 coded interactions, physicians addressed feelings 55% of the time (n=21). As with active listening, there were three actions that followed the acknowledgment of feelings: normalization and legitimization, normalization without legitimization, and some combination of demeaning, dissuading, and/or devaluing.

In the 21 interactions where feelings were addressed, those feelings were subsequently normalized 86% of the time (n=18). Of those that were normalized, 72% were subsequently legitimized (n=13), while 28% were not legitimized (n=5). Finally, physicians chose to actively demean, devalue, and/or dissuade patient feelings 14% of the time (n=3).

When physicians made the effort to normalize a patient's feelings, they did so through expressing warmth both nonverbally and verbally. In *Grey's Anatomy*, these expressions of warmth in reaction to patient's feelings occurred either at the beginning of

the interaction, or during the course of it. Of the 18 interactions in which warmth was conveyed through a physician to a patient, 61% occurred during the initial interaction between a physician and a patient (n=11), while 39% occurred subsequently (n=7).

On the other hand, physicians failed to address feelings in 45% of coded interactions (n=17). There were three main reasons that physicians chose to avoid addressing feelings. First, physicians were less likely to address feelings when they sensed that doing so would result in a trade off for gathering additional medical information. Second, there were instances in which physicians chose to pass up opportunities to address feelings if the opportunities were a result of the patient expressing feelings in the presence of the physician, but not to the physician him or herself. Finally, physician bias often hampered their willingness to address feelings.

Physicians ignored patient's feelings 6% of the time when addressing those feelings would have resulted in a trade-off for gathering medical information (n=1). Physicians ignored patients feelings an additional 47% of the time when the feelings were expressed in the presence of the physician, but not to the physician directly (n=8). Finally, physicians ignored patients expressions of feelings 47% of the time when the physician's own bias got in the way (n=8).

There were four types of non-mutually exclusive physician bias that hampered a physician's willingness to address feelings. First, a lack of physician interest in both the patient and in the patient's case was the most common occurrence, single-handedly resulting in 50% of total physician bias failures (n=4). Second, physicians ignored a patient's feelings as a result of physician's lack of respect for the patient 25% of the time (n=2).

Third, physicians were unlikely to address a patient's feelings when they perceived that their efforts were futile. Although there was only one instance in which perceived futility was the *main* cause of physician bias, it was a confounding factor in 88% of failures resulting from physician bias (n=6). The final circumstance in which physicians ignored patient feelings instead of addressing them was unnecessary consent. Like perceived futility, unnecessary consent was only the *main* cause of physician bias in one instance. That said, it was a confounding factor in 63% of failures resulting from physician bias (n=4).

Negotiation to Reach a Common Ground

Despite the inconsistent application of the five previous communication skills, physicians and their patients found ways to work together to establish common ground, or meet a mutually beneficial conclusion (Simpson et al., 1991), in 84% of the interactions (n=32). Even in the three situations where patients died during surgery, the decision to undergo the procedure had been mutually agreed upon. In order to negotiate common ground, four effective skills were used: rapport building, patient-centered interaction, decision analysis, and brainstorming.

Reframing was the most common method of negotiation, occurring in 53% of physician-patient negotiations (n=17). Reframing was used in two ways: to get the patient to reconsider their view on life, and to get the patient to reconsider the rationality of their immediate emotions. Reconsideration of the patient's view on life was used in 59% of reframing instances (n=10), while reconsideration of the patient's immediate emotions were reframed in the remaining 41% of cases (n=7).

Patient-centered interaction occurred in 22% of physician-patient negotiations (n=7). Like reframing, patient-centered interaction was used in two ways: communicatively (through the physicians' words and nonverbal cues) and actively (through the physician's intentional, physical actions). Patient centered interaction was communicative 71% of the time (n=5) and active in the remaining 29% of instances (n=2).

Decision analysis also occurred in 22% of physician-patient negotiations (n=7). Decision analysis was used to develop a plan of action in two types of situations: clear (well understood illness or injury; routine or elective procedure) and touch-and-go (mysterious, novel, or inexplicable illness or injury; experimental procedure). Clear medical situations made up 71% of decision analysis attempts (n=5), while decision analysis was used to develop a plan of action in touch-and-go cases 29% of the time (n=2). Finally, the remaining 3% of successful negotiations were carried out through brainstorming (n=1).

While common ground between a physician and a patient was negotiated a majority of the time, 16% of negotiation attempts failed (n=6). There were two reasons for failed attempts: failure to understand the patient's perspective on the illness or injury and a lack of physician interest in negotiation. Each reason was responsible for 50% of negotiation failures (n=3).

CHAPTER V

DISCUSSION AND IMPLICATIONS

This study sought to identify elements of the Common Ground Instrument as they were portrayed in *Grey's Anatomy*. The importance of this research is related to the potential effect of medical dramas on influencing patient expectations about communication interactions with their physicians. The results provide five primary conclusions related to patient expectations as they are shaped by medical dramas. Each conclusion is followed by the theoretical implications exclusive to that conclusion. Finally, overarching theoretical implications are discussed.

The Influence of Family Members on Communication

The presence of family members did not necessarily help or hinder the completion of any of the six communication skills exhibited by the physician. Furthermore, the nature of the relationship between the patient and the family member (e.g., supportive, authoritative, strained) did not determine the presence or absence of any of the six communication skills. Instead, the determinant was the degree to which the family member actively engaged in conversation with the physician and/or with the patient in the presence of the physician.

In terms of rapport building, results indicated that over a quarter of apparent rapport was initiated by a family member. About half of the time, family members acted as a link between the physician and the patient to help establish meaningful rapport. One example of this familial influence was in Season Five, Episode 17, when Trish Shelley

helped Dr. Bailey and Dr. Meredith Grey convince patient Meghan Shelley to undergo a radical stomach-removal surgery as a preventative measure against cancer. Although results from a genetic test revealed that the sisters each had a three-in-four chance of developing stomach cancer, Meghan was hesitant to undergo the procedure because of the possible side-effects. Trish intervened, however, and subsequently helped Dr. Bailey and Dr. Grey establish a connection with the patient that ultimately led to Meghan's decision to go through with the procedure.

In the other half of physician-patient rapport initiated by a family member, rapport was established at the expense of a family member as opposed to as a result of their intentional influence. In Season Five, Episode Nine, Dr. Karev established rapport with patient Lauren Hammer at the expense of Lauren's condescending and critical husband. Throughout the first several interactions between Dr. Karev and Lauren, Dr. Karev's attempts to establish rapport were hampered by interruptions and disapproval from the patient's husband. When Dr. Karev stood up for Lauren (by reprimanding her husband for "walking away" instead of listening to her concerns), the patient was finally able to express herself to both her husband and to Dr. Karev; subsequently, a therapeutic and trusting connection was established between the physician and the patient.

Like rapport building, whether or not physicians managed information in *Grey's Anatomy* was also influenced by family members. Although family member involvement in information management was not as common as it was in rapport building, there were three situations in which family members were able to provide valuable information to physicians. First, when treating a patient who was unconscious, incapacitated, or irrational, it was virtually impossible for physicians to engage in agenda setting and

information management no matter how much effort the physician was willing to set forth. Therefore, family members were able to provide agenda items and information to the physician in the patient's place. Second, when treating pediatric patients, physicians looked to the patient's parent(s) as a source of accurate and relevant information. Finally, when treating patients whose illness or injury was secondary to some other factor (e.g., marital tension, job security, status of a fellow patient), physicians were often unable to get the patient to engage in information management. Thus, family members who understood the significance of the illness or injury were called on to provide information on behalf of the patient.

Despite the Common Ground Instrument's focus on active listening as a means of understanding the patient's perspective on the illness, this research indicates that understanding is achieved through passive observation three-quarters of the time. Of incidences of passive observation, nearly two-thirds involved family members. Family members were able to elicit a patient's perspective on their illness in two ways.

First, family members "rehashed" the patient's illness experience to the physician on behalf of the patient. The physician was subsequently provided the opportunity to engage in conversation with the family member or the patient, or to remain a passive observer. Patient Lauren Hammer's situation provided an example of this family member intervention as well, as her husband "rehashed" her illness experience (hypochondria) directly to the physician. Second, family members and friends engaged in conversation with the patient in the presence of the physician in such a way that the physician was exposed to clues about the patient's perspective on the illness that they could subsequently choose to explore or to take at face value.

The final influence family members had on physician-patient communication success involved the physician's decision whether or not to address the patient's feelings. Almost half of all of the situations in which a patient's feelings were not addressed were the result of the feelings being expressed in the presence of the physician, but not to the physician directly. This was the case when family members were involved in the patient's care, and thus were present during potential interactions between the patient and the physician.

Theoretical Implications. According to Potter's (1986) Identity Dimension of Perceived Realism, people who identify with role models (in this case, viewers who identify with *Grey's Anatomy* patients), are more likely to be influenced by the behaviors, beliefs, and attitudes of those role models. Strength of the impression that role models have on viewers increases as the number of unique similarities between viewer and role models increase (Potter, 1986). Thus, viewers of *Grey's Anatomy* with family members who play an active role in their health care are more likely identify with patients with similar familial relationships.

As a result of the Identity Dimension, the role of family members in *Grey's Anatomy* has two possible real-world implications. First, there were several instances in which family members' hindered communication between the physician and the patient. This was especially common in cases with strained marriages, estranged family members, and overbearing friends. Thus, viewers of *Grey's Anatomy* who are living with these types of "tense" relationships are likely to experience a strong feeling of identification. This increased identification could subsequently lead viewers to elaborate similarities between television characters and the relationships in their own lives; thus, viewers of

Grey's Anatomy would be likely to consider the negative influence family members can have on physician-patient interaction. It follows that real-world patients who identify strongly with a patient (or patients) on *Grey's Anatomy* would be hesitant to have family members present during interactions with physicians.

Conversely, there were several instances in which family members helped communication between the physician and the patient. In these situations, family members acted on behalf of the patient, either by recounting the patient's illness experience or providing agenda items and related information. The real-world implications of this type of participation are two-fold. On the positive side, patients experiencing acute illness or injury may be more inclined to bring family members to appointments given the potential benefits of family member participation (e.g., supplementing information the patient may have forgotten to give the physician). On the negative side, however, real-world patients with family members present during interactions with physicians may rely too heavily on the family member's participation, thus becoming passive patients.

The Influence of Physician Bias on Communication

Although it was not always apparent to the patients treated in *Grey's Anatomy*, each of the physicians featured in the show was riddled with personal biases. Biases affected each physician's ability to communicate in a unique way, but every physician featured in the show allowed their personal opinions and experiences to affect the treatment they provided to a patient at least once. The manifestation of bias affected the presence or absence of each of the communication skills.

A combination of a lack of physician interest in the case and a lack of physician respect for the patient explained over half of the interactions in which rapport building was absent. A lack of physician interest in the case was attributed to two factors: the physician's perception that the case was "boring" (non-surgical), and distractions in the physician's personal life (e.g., romantic relationships, sick co-workers, death of a parent). A lack of physician respect for the patient was rooted in the manner in which a chronic condition was managed, an acute illness was contracted, or an injury was received (e.g., diabetes secondary to obesity, infection as a consequence of an illegal surgery, narcotic-induced fall).

Similar to rapport building, over one-third of absence of both agenda setting and information management is explained by physician bias. There were three types of physician bias that hindered agenda setting and information management: lack of patience, lack of interest, and lack of compassion. Physicians grew impatient when patients digressed from medical topics to personal topics, when patients were unwilling to cooperate with the physicians' recommendations, and when the patients made suggestions regarding the direction of their care. Like rapport building, physicians were uninterested when cases were perceived as "boring" and when distractions from their personal life crept into their professional life. Finally, despite the obvious degree of empathy required to practice medicine on human beings on a daily basis, physicians exhibited a lack of compassion when they became captivated by a surgery (illness) as opposed to a patient (person).

Almost half of the absence of addressing feelings can be explained by physician bias. There were four types of physician bias that affected addressing feelings, none of

which were mutually exclusive. First, a lack of physician interest in both the patient and the patient's case diminished the likelihood that the physician would address feelings expressed by the patient. As with past descriptions of lack of interest, "boring" cases and distractions from the physician's personal life deterred physicians from addressing feelings.

For instance, when patient Kendall Sulley interacted pre-operatively with Dr. Christina Yang in Season Five, Episode 18, Dr. Yang was unwilling to address the patient's overt clues which indicated fear and anxiety. Ms. Sulley was unaware of the reason for Dr. Yang's apparent disinterest, and interpreted the physician's lack of engagement as a sign that Dr. Yang thought the patient's hernia repair was "just another surgery." That said, the show's audience was aware of the fact that Dr. Yang had just been informed that a fellow surgical resident had been diagnosed with brain cancer.

Second, lack of respect for the patient again discouraged physicians' motivation to address patients' feelings. Again, lack of respect was rooted in the manner in which a chronic condition was managed, an acute illness was contracted, or an injury was received. An example of lack of respect being exhibited by the patient was Dr. Shepherd's reaction to patient William Dunn in Season Five, Episodes 11-13. Dunn, a death row inmate, was brought to the hospital after being stabbed in the spine with a sawed down during a prison brawl. Despite the critical nature of the patient's injuries and his complicated perspective on his situation, Dr. Shepherd made no effort to address the patient's feelings. In fact, the surgeon actively dismissed patient clues.

Third, physicians did not address patients' feelings when the physicians perceived that their efforts were futile. Perceived futility occurred during physicians' interactions

with patients living with chronic conditions who were well-educated about their illness, treatment options, and outcome expectations. This sense of futility was evident during Dr. Meredith Grey's interaction with patient Harper Avery in Season Six, Episode 16.

Dr. Avery, a world-renowned general surgeon, was accustomed to being on the "provider" side during medical interactions. His medical understanding, coupled with his knowledge about hospital politics, led to a patient whose feelings were, at least on the surface, guarded, tough, and based on fact, not feeling. Thus, the physicians efforts to address the patient's emotions would have been quickly deterred as a result of the patient's unwillingness to acknowledge weakness or vulnerability.

Finally physicians did not address patients' feelings in situations where patient consent was not necessary to carry out the medically recommended course of action. Consent was unnecessary in situations in which the patient was deemed unfit to make medical decisions (as a result of mental illness or instability) and when non-retractable consent had been given previously. One example of a physician failing to address a patient's feeling because consent was unnecessary was Dr. Erica Hahn's interaction with patient Stan Mercer in Season Five, Episode Five.

Following his wife's discovery of his infidelity, Mr. Mercer experienced an acute anxiety attack. Following a few standard tests to confirm that the patient's heart was still strong enough to withstand general anesthesia, Dr. Hahn expressed no interest in understanding why the patient had experienced such acute anxiety, as he had already consented to participate in a "domino surgery" (a logistically complicated surgery in which six kidney recipients were matched with six kidney donors who were previously found to be incompatible matches with their own loved ones, so the donations were made

to one another's loved ones). Had the patient's consent not been given previously, it is likely that the physicians would have had to work harder to ensure that the patient was still willing to participate in the "domino surgery."

When common ground was not achieved in interactions, physician bias was to blame half of the time. Again, physician disinterest, resulting from either a perceived "boring" case or distractions from the physician's personal life, was the central source of bias that manifested in the quality of care provided to the patient. For instance, Dr. Alex Karev was unwilling to negotiate common ground with patient Aaron Mafricci in Season Six, Episode 12 because the patient's symptoms indicated a textbook case of pneumonia.

Theoretical Implications. As previously discussed, Cultivation Theory posits that the more often television viewers are exposed to consistent, genre-specific messages, the more likely they are to "incorporate information from their television viewing into their understanding of the world around them" (Brodie et al., 2001, p. 192). Thus, regular viewers of *Grey's Anatomy* are likely to "understand" real-world hospitals as functioning similarly to Seattle Grace Hospital. While in some respects this understanding is a positive one (e.g., knowledgeable, compassionate physicians), it has many negative connotations as well. The expectation of physician bias is likely one of the most detrimental, as it permeates several aspects of patient care.

First, patients who have been exposed to the negative effects of physician bias on *Grey's Anatomy* may attempt to present a certain "self" to physicians. When viewers observe physicians providing atypical care (positive *or* negative) to patients as a result of particular patient characteristics (e.g., drug addiction, homelessness, single parent, sexual orientation) or implications of the illness (e.g., cutting-edge or experimental surgeries),

the viewers may be more or less inclined to reveal similar characteristics in real-world interactions with physicians. Results from this study indicated that every physician employed at Seattle Grace Hospital provided atypical care as a result of personal bias at least once. Therefore, viewers are likely to cultivate an understanding of physicians which indicates that the treatment patients receive is, at least in part, dependent on the physicians' personal bias for or against the patient. As a result, patients may try to present an idealized version of themselves to the physician to win the physicians supposed approval.

Second, patients who are regular viewers of *Grey's Anatomy* will likely enter real-life medical encounters with a heightened interest in their physician's romantic, familial, and professional relationships as these types of relationships are were consistent contributors to physician's lack of interest in a patient's case. Real-world patients may make be inclined to make assumptions regarding physician's apparent lack of interest as the result of some personal life drama, when in reality the physician may simply be uninterested in the patient's case. In trying to decode physicians' lack of interest, patients may also be distracted, and as a consequence fail to act as equal contributors during communication interactions.

Finally, patients who have witnessed the negative effects of physician bias as it is exhibited in *Grey's Anatomy* may form an overarching lack of trust in physicians and suspicion about hospital politics. *Grey's Anatomy* viewers may be inclined to consider physicians who act according to personal ulterior motives (e.g., manipulating a patient to consent to a risky trial procedure for the physician's personal research) or according to

ulterior motives that benefit the whole hospital (e.g., manipulating a patient to consent to a radical transplant surgery that will garner the hospital national exposure).

Responding to Physician Statements (Information Management)

While the Common Ground Instrument cites actively asking “open-ended questions . . . with occasional closed-ended points of clarification” as the ideal method of managing information (Lang et al., 2004, p. 198), physicians in *Grey’s Anatomy* managed information using passive statements two-thirds of the time. More specifically, when gathering information about the patient’s emotional needs and physical condition, the physician used passive statements three-quarters of the time. In Season Five, Episode Three, Dr. Alex Karev passively managed emotional information with patient Jack O’Brien when the physician stated “I know you’re scared, but if you want to live, you need the surgery.” Similarly, in Season Five, Episode Five, Dr. Karev passively managed information about the patient’s physical condition when he stated “it means something’s wrong” in response to patient PJ Walling’s questions about the meaning behind his symptoms.

In gauging patient satisfaction, the use of active questions and passive statements was fairly even. Dr. Stevens determined patient Arnie Grandy’s satisfaction with Dr. Karev by asking “how’s your doctor treating you?” in Season Five, Episode Three. By asking a question as opposed to making a statement, Dr. Stevens encouraged Mr. Grandy to express any dissatisfaction with Dr. Karev that the patient may have been hesitant to bring up on his own. In a different way, Dr. Sloan invited patient participation by stating “I think you’ll be satisfied” in response to patient David Young’s question about the appearance of his face donation in Season Five, Episode 18.

Only in managing information about symptoms did physicians use vastly more active questions than passive statements (more than three-quarters of the time). Dr. Stevens asked patient Arnie Grandy “how long has your mouth been twitching like that?” during an initial consultation in Season Five, Episode Three. Dr. Sloan found a much more indirect way of seeking information about Irving Waller’s erectile dysfunction, as he stated “if you’re having symptoms I can write you a prescription” during a follow-up visit in Season Six, Episode Four. By using a statement as opposed to a question, Dr. Sloan avoided making Mr. Waller uncomfortable as he allowed the patient to control the flow of information. This was especially important considering the potentially awkward or ashamed feelings associated with erectile dysfunction.

Theoretical Implications. As Roter and Hall indicated (2006), patients are expected to tell stories of their *illness experiences* in order to provide the physician with contextual clues related to a given illness or injury. Despite the potential benefits of sharing experiences, however, patients are often reluctant to share openly and honestly with physicians (Roter & Hall, 2006). As previously stated, individuals learn how to act in novel situations through the experiences of family members, friends, and popular media (Festinger, 1954; Roter & Hall, 2006). Therefore, a patient in need of a surgical procedure for the first time may rely on shows like *Grey’s Anatomy* as a means of shaping expectations.

According to Social Cognitive Theory, viewers of *Grey’s Anatomy* would therefore likely assume that physicians typically manage information (about emotions and physical condition in particular) by using statements, not questions. As a result, patients would be less likely to participate actively during interactions with their

physicians, as the patient would have assumed that their physician's statements reflected understanding of the situation. Unfortunately, communication education in medical school has been reformed to encourage mutual participation between physicians and patients; therefore, a lack of patient participation is not desired. In line with Cultivation Theory, however, heavy viewers of *Grey's Anatomy* would likely hold that physicians can successfully manage information without extensive patient participation. Thus, mutual participation during information management is one area where a disconnect between recently trained physicians and viewers of *Grey's Anatomy* may exist.

Passive Observation

In a similar vein, the Common Ground Instrument cites using active listening as a means of exploring patient clues and establishing the patient's perspective on their illness or injury. That said, the physicians in *Grey's Anatomy* only used active listening as a means of establishing the patient's perspective on the illness a quarter of the time; furthermore, clues were only actively explored a quarter of the time. Thus passive listening and internal processing made up the vast majority of the means of establishing the patient's perspective on the illness.

Theoretical Implications. The implications of the tendency of *Grey's Anatomy* physicians to rely on passive observation in order to establish the patient's perspective on the illness or injury are similar to the implications of passive statements used to manage information. As a result of Cultivation Theory, viewers of *Grey's Anatomy* are likely to instill a great amount of faith in physicians' ability to read patient clues. But again, communication education reform in medical school encourages a mutual participation

mode, thus physicians are trained to work with patients as partners by exploring clues, not internalizing clues and making assumptions based on their unshared interpretation.

The *Process* of Communication

The final conclusion related to medical dramas as they shape viewer's expectations about the patient's "role" is that communication between physicians and patients is comparable to an evolving organism; while the surface remains the same, the substance is constantly shifting. For instance, results indicated that the manifestation of warmth was inconsistent throughout and between interactions. While warmth was exhibited immediately in some interactions, others necessitated a strong foundation between the physician and the patient before warmth was expressed.

The influence of physician bias was also evolutionary. While physician bias pervaded all interactions between a physician and a patient in some cases, physician bias was revisited, addressed, and resolved in others. Family members, for instance, were often able to draw physician's attention to their own biases against patients. An example of physician bias that was publically identified and subsequently resolved was in Season Six, Episode 21, in which Dr. Karev treated patient Bobby Corso. Initially, the physician attributed Mr. Corso's skin infection (a direct consequence of his morbid obesity), to the patient's laziness and lack of self-respect. As a result of this bias, Dr. Karev remained very detached and judgmental of Mr. Corso, rejecting the patient's attempts at small talk and agenda setting.

The patient's wife intervened, however, and explained the circumstances under which Mr. Corso gained such a dramatic amount of weight, the attempts he had made at losing weight, and the fatalistic worldview he had developed as a result of constant

judgment and disgust. Subsequently, Dr. Karev realized that they had been treating the patient like the “bad guy,” when in reality, he was very much a victim. As a result of this realization, Dr. Karev was more open to the patient’s attempts at establishing rapport. The physician’s willingness to participate resulted in the formation of a connection that Dr. Karev relied on in his attempts to convince Mr. Corso to start actively regaining control of his life as opposed to passively waiting to die.

Theoretical Implications. Unlike the implications of the previous four conclusions, the implications of *Grey’s Anatomy* on viewers’ understanding of communication as a dynamic *process* are of a positive nature. According to the Health Belief Model (Lewin et al., 1944), the key to adopting healthier behaviors (e.g., actively participating in healthcare interactions) is an individual’s belief that they can “own” their own health. As viewers of *Grey’s Anatomy* are likely more aware of the dynamic nature of health and healthcare, the viewers understand that patients cannot become stagnant during healthcare interactions; instead, patients must constantly be working elaborate and improve communication between themselves and their physicians.

Communication as a *process* also ties in with the notion of health self-efficacy. According to Bandura (1986), individuals who possess high levels of health self-efficacy believe that they can manage their health successfully. Through Cultivation Theory, viewers of *Grey’s Anatomy* are likely to conceptualize communication between physicians and their patients as a *process*. Therefore, viewers with high levels of health self-efficacy are more likely to maintain healthy lifestyles (e.g., actively participating in healthcare interactions), and thus have higher levels of overall life satisfaction.

General Implications

In conclusion, by applying elements of Entertainment Education, Cultivation Theory, and Social Cognitive Theory, this research has demonstrated several likely expectations formed by viewers of *Grey's Anatomy*. First, viewers of *Grey's Anatomy* are likely to consider the negative influence family members can have on physician-patient interactions in the real world. Additionally, while viewers may be more likely to bring family members to appointments as sources of supplemental information, the viewers may also rely too heavily on the participation of their family member(s), thus becoming a passive patient.

Second, patients who have been exposed to the negative effects of physician bias on *Grey's Anatomy* may attempt to present a certain “self” to physicians. Patients who are regular viewers of *Grey's Anatomy* will likely enter real-life medical encounters with a heightened awareness of the reasons behind physicians’ apparent lack of interest in the patient’s case. Additionally, viewers who have witnessed the negative effects of physician bias may form an overarching lack of trust in physicians and suspicion of hospital politics.

Third, viewers of *Grey's Anatomy* would likely assume that physicians typically manage information by using statements, not questions. Fourth, viewers are additionally likely to instill a great amount of faith in physicians’ ability to read patient clues. Finally, viewers of *Grey's Anatomy* are likely more aware of the dynamic nature of health and healthcare. Thus, viewers understand that patients must actively work to perpetually improve the process of communication.

Generally speaking, there is one final implication of *Grey's Anatomy* on viewers: the audience sees everything that the patient does not. Unless the viewer is a surgeon themselves, *Grey's Anatomy* is the only window into the personal and professional lives of surgeons. As Cultivation Theorists posit, a cultivation effect is most likely in medical contexts where audiences have limited experience (Quick, 2009). While many viewers have undoubtedly visited surgical units before (either as a patient or as a family member), those viewers have no experience regarding what physicians say about patients when they are out of the patient's earshot. A viewership made up of a majority of non-surgeons, then, has no baseline whatsoever to evaluate the realism of what goes on "behind closed doors" on a surgical unit. Therefore, viewers are more likely to accept the lives of surgeons on *Grey's Anatomy* as the truth.

Limitations and Future Research

This thesis has examined the portrayal of communication education reform in medical schools as it is portrayed in a popular medical drama. Although standardized communication education is taught, there is no legal and ethical means of evaluating whether or not physicians actually utilize learned skills in interactions with patients. Therefore, the first limitation of this thesis is that real-life communication between physicians and patients remains private and ungeneralizable. Therefore, it is impossible to say whether the discrepancies found between communication in *Grey's Anatomy* and communication in real-life situations actually exist. Further research regarding whether or not physicians exhibit skills identified in the Common Ground Instrument is needed.

Were such information attained, experimental designs could be implemented to test both causality (e.g., does watching *Grey's Anatomy* affect patients' satisfaction with

physician communication) and correlation (e.g., are those who watch *Grey's Anatomy* more or less satisfied with physician communication than those who do not regularly watch *Grey's Anatomy*). Additionally, having baseline data about how physicians communicate with patients in real life could be used to compare whether patients who watch *Grey's Anatomy* have realistic expectations about the skills used in physician-patient communication.

Another limitation of this thesis is that it is based on only one current, top-rated medical drama. In addition, this thesis is based on research collected from a limited sample of 20 episodes of *Grey's Anatomy*. Thus, the findings do not represent all physician-patient interactions in current medical dramas. Further research on several of the top-rated medical dramas, as well as programs that feature medical interactions but are not based on them, is needed. Finally, medical dramas are only one type of medical programming on television today. Medically based comedies, reality shows, and talk shows all likely influence patient expectations as well; thus, more research is needed to obtain a broader scope of physician-patient interaction as it is portrayed through television programming.

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APPENDIX A
Physician Index (ABCb, 2011)

Dr. Teddy Altman
Attending, Cardiothoracic Surgery

Dr. Jackson Avery
Intern

Dr. Miranda Bailey
Attending, General Surgery

Dr. Lexie Grey
Intern

Dr. Meredith Grey
Resident

Dr. Erica Hahn
Attending, Cardiothoracic Surgery

Dr. Owen Hunt
Attending, Trauma Surgery

Dr. Alex Karev
Resident

Dr. George O'Malley
Resident

Dr. Derek Shepherd
Attending, Neurosurgery

Dr. Mark Sloan
Attending, Plastic Surgery

Dr. Izzie Stevens
Resident

Dr. Callie Torres
Attending, Orthopedic Surgery

Dr. Arizona Robbins
Attending, Pediatric Surgery

Dr. Richard Webber, Chief of Surgery)
Attending, General Surgery

Dr. Christina Yang
Resident

APPENDIX B
Episode Index

Season 5 | Episode 3 | Aired 10/9/08

Here Comes the Flood

“A plumbing leak becomes a deluge and wreaks havoc at Seattle Grace, as the Chief attempts to implement new teaching policies” (ABCc, 2011).

Season 5 | Episode 4 | Aired 10/16/08

Brave New World

“Meredith freaks out when Derek discovers her mother's old diary in the house and Cristina stumbles into a part of the hospital that she's never seen before” (ABC, 2011).

Season 5 | Episode 5 | Aired 10/23/08

There's No "I" in Team

“Bailey heads up a team of surgeons performing a "domino procedure" in which each surgery hinges on the one preceding it” (ABC, 2011).

Season 5 | Episode 6 | Aired 10/30/08

Life During Wartime

“To help Bailey become a better surgeon, the Chief gives her new power, new responsibility, and the challenge of removing a girl's inoperable tumor” (ABC, 2011).

Season 5 | Episode 8 | Aired 11/13/08

These Ties That Bind

“One of Meredith's oldest friends, Sadie, becomes an intern at Seattle Grace, but Mer's friends are less-than-welcoming to her” (ABC, 2011).

Season 5 | Episode 9 | Aired 11/20/08

In The Midnight Hour

“Meredith, Cristina and Bailey come to Lexie and Sadie's rescue when a surgery goes horribly wrong” (ABC, 2011).

Season 5 | Episode 11 | Aired 01/8/09

Wish You Were Here (part 1 of 3)

“Bailey teams with Seattle Grace's new pediatric surgeon, Dr. Arizona Robbins, to save the life of a young patient” (ABC, 2011).

Season 5 | Episode 12 | Aired 01/15/09

Sympathy for the Devil (part 2 of 3)

“Derek's mother makes a surprise visit to Seattle and meets Meredith for the first time, as Mark tries to conceal his relationship with Lexie from her” (ABC, 2011).

Season 5 | Episode 13 | Aired 01/22/09

Stairway to Heaven (part 3 of 3)

“Bailey grows desperate as a patient's condition becomes more and more dire” (ABC, 2011).

Season 5 | Episode 17 | Aired 03/12/09

I Will Follow You Into the Dark

“After learning at a deposition that more of his patients have died than survived, Derek decides to quit, even as Meredith refuses to give up on him” (ABC, 2011).

Season 5 | Episode 18 | Aired 03/19/09

Stand by Me

“Derek refuses to return to SGH and it takes a visit from the Chief himself to set him straight; Izzie's cancer secret comes out” (ABC, 2011).

Season 5 | Episode 21 | Aired 04/30/09

No Good at Saying Sorry

“Izzie gets a surprise visit from her mother (Sharon Lawrence); Thatcher tries to make amends with Meredith and Lexie; Meredith and the Chief argue over a controversial case” (ABC, 2011).

Season 6 | Episode 4 | Aired 10/8/09

Tainted Obligation

“When Thatcher returns to the hospital with a failed liver, Meredith must save his life; Izzie empathizes with a tumor-riddled patient; annoyed with Cristina's competitive zeal, Mark tricks her into assisting on an unusual surgery” (ABC, 2011).

Season 6 | Episode 7 | Aired 10/29/09

Give Peace a Chance

“When the hospital lab tech, Isaac, discovers he has an inoperable tumor wrapped around his spine, he turns to Derek for help; Derek challenges Richard's authority” (ABC, 2011).

Season 6 | Episode 8 | Aired 11/5/09

Invest in Love

“The parents of Arizona's 10-year-old patient offer the hospital a generous donation, but Arizona finds herself in a conflict of interest when the patient's condition worsens; Cristina tests her boundaries with Owen” (ABC, 2011).

Season 6 | Episode 12 | Aired 01/21/10

I Like You So Much Better When You're Naked

“After learning about Richard's drinking problem, Derek confronts him; Izzie returns, hoping to reconcile with Alex; tensions run high for Teddy, Cristina and Owen in the aftermath of Cristina's startling confession” (ABC, 2011).

Season 6 | Episode 15 | Aired 02/18/10

The Time Warp

“Callie, Bailey and Richard present pivotal surgical cases from their pasts when Derek restores the hospital lecture series” (ABC, 2011).

Season 6 | Episode 16 | Aired 03/4/10

Perfect Little Accident

“A famous surgeon is rushed to the hospital; Callie and Arizona try to help Teddy and Sloan move on from their pasts” (ABC, 2011).

Season 6 | Episode 19 | Aired 04/1/10

Sympathy for the Parents

“When Alex's brother shows up at the hospital with a hernia, Alex must get Bailey's approval for pro-bono surgery; parts of Alex's past are revealed to his friends and colleagues” (ABC, 2011).

Season 6 | Episode 20 | Aired 04/29/10

Hook, Line and Sinner

“Mark, Teddy, Callie and Arizona help Sloan deliver her baby; the doctors treat a crab boat captain who was stabbed with a giant shark hook” (ABC, 2011).

Season 6 | Episode 21 | Aired 05/6/10

How Inensitive

“Bailey preps the team with mandatory sensitivity training prior to admitting a 700-pound patient and the case proves to be challenging in every sense of the word” (ABC, 2011).

Season 6 | Episode 22 | Aired 05/13/10

Shiny Happy People

“All reassess their personal lives after witnessing a chance reunion between two long-lost lovers in the emergency room; Karev treats a troubled teen (Demi Lovato); Meredith shares her suspicions with Cristina” (ABC, 2011).

APPENDIX C
Patient Index

Season Five | Episode Three

Jack O'Brien, 47

- New patient
- Admitted
- Acute illness
- Alone
- Necessary procedure

Larry Padmore, 63

- New patient
- Admitted
- Chronic illness
- Alone
- Necessary procedure

Shelley Boden, 34

- Old patient
- Admitted
- Chronic illness
- Accompanied by sister
- Necessary procedure

Season Five | Episode Four

Arnie Grandy, early 60's

- New patient
- Emergency Department; subsequently admitted
- Acute injury; chronic illness
- Accompanied by wife
- Necessary procedure

Duncan Paley, 8

- New patient
- Admitted
- Chronic illness
- With parents
- Necessary procedure

Season Five | Episode Five

Stan Mercer, 46

- New patient
- Admitted
- Chronic illness
- Accompanied by wife and “mistress”
- Necessary procedure

Kurt Walling, 56

- New patient
- Admitted
- Chronic illness
- Accompanied by son
- Necessary procedure

Lindsey Herman, mid-30’s

- New patient
- Admitted
- None (kidney donor)
- Accompanied by “mister”
- Elective procedure

PJ Walling, 23

- New patient
- Admitted
- None (kidney donor)
- Accompanied by father
- Elective procedure

Nancy Mercer, 43

- New patient
- Admitted
- None (kidney donor)
- Accompanied by husband (and his mistress)
- Elective procedure

Season Five | Episode Six

Tory Begler, 10

- New patient
- Admitted
- Chronic illness
- Accompanied by parents and several relatives
- Necessary procedure

Season Five | Episode Eight

Timothy Miller, early 40's

- New patient
- Emergency Department
- Acute injury
- Alone
- Necessary procedure

Clay Bedonie, early 50's

- New patient
- Admitted
- Chronic Illness
- Alone
- Necessary procedure

Season Five | Episode Nine

Arthur Saltanoff, 42

- New patient
- Emergency Department; subsequently admitted
- Chronic illness
- Accompanied by daughter
- Necessary procedure

Lauren Hammer, early 30's

- New patient
- Admitted
- Acute illness
- Accompanied by husband
- Necessary procedure

Season Five | Episodes Eleven – Thirteen

Margaret Smith, early 30's

- New patient
- Admitted
- Acute injury
- Alone
- Necessary procedure

Jackson Prescott, 10

- Old patient
- Admitted
- Chronic illness
- Accompanied by mother
- Necessary procedure

William Dunn, late 30's

- New patient
- Admitted
- Acute injury
- Alone
- Necessary procedure

Chuck Rubin, late 30's

- New patient
- Admitted
- Acute infection
- Accompanied by brother
- Necessary procedure

Season Five | Episode Seventeen

Trish Shelley, 31

- Old patient
- Admitted
- None (stomach removal)
- Accompanied by brother and sister
- Elective procedure

Megan Shelley, 27

- Old patient
- Admitted
- None (stomach removal)
- Accompanied brother and sister
- Elective procedure

Mike Shelley, 23

- Old patient
- Admitted
- None (stomach removal)
- With sisters
- Elective procedure

Beth Dearborn, 17

- New patient
- Emergency Department; subsequently admitted
- Chronic illness
- Accompanied by two classmates (“seizure patrol”)
- Necessary procedure

Season Five | Episode Eighteen

David Young, 28

- Old patient
- Admitted
- None (facial transplant)
- Accompanied by three friends
- Elective procedure

Kendall Sully, late 50’s

- New patient
- Admitted
- Acute illness
- Alone
- Necessary procedure

Season Five | Episode Twenty One

Willow Zelman, early 20’s

- New patient
- Admitted
- Acute injury
- Accompanied by sister
- Necessary procedure

Season Six | Episode Four

Irving Waller, 82

- New patient
- Admitted
- None (penile implant)
- Accompanied by son and daughter-in-law
- Elective procedure

Randy Alby, 31

- New patient
- Admitted
- Chronic illness
- Accompanied by girlfriend
- Necessary procedure

Season Six | Episode Seven

Isaac Tahir, mid-40's

- New patient/old friend
- Admitted
- Chronic illness
- Alone
- Necessary procedure (eventually)

Season Six | Episode Eight

Hilary Boyd, 15

- New patient
- Emergency Department; subsequently admitted
- Acute injury
- Accompanied by parents
- Necessary procedure

Wallace Anderson, 10

- Old patient
- Admitted
- Chronic illness
- Accompanied by parents
- Necessary procedure

Season Six | Episode Twelve

Aaron Mafricci, mid-40's

- New patient
- Emergency Department, then admitted
- Acute illness; subsequently diagnosed as chronic
- Accompanied by partner
- Necessary procedure

Season Six | Episode Sixteen

Harper Avery, mid-60's

- New patient
- Emergency Department; subsequently admitted
- Acute illness
- Alone
- Necessary procedure

Elliot Meyers, mid-20's

- Old patient
- Admitted
- Chronic illness
- Accompanied by sister
- Necessary procedure

Season Six | Episode Nineteen

Regina Thompson, 34

- New patient
- Emergency Department; subsequently admitted
- Acute injury
- Accompanied by husband
- Necessary procedure

Season Six | Episode Twenty

Doug Morshower, 15

- New patient
- Emergency Department
- Acute injury
- Accompanied by father
- Necessary procedure

Season Six | Episode Twenty One

Bobby Corso, mid-30's

- New patient
- Admitted
- Chronic illness
- Accompanied by wife
- Necessary procedure

Jamie Anders, mid-20's

- New patient
- Admitted
- Acute injury
- Alone
- Necessary procedure

Season Six | Episode Twenty Two

Hailey Mae, 16

- New patient
- Admitted
- Enduring illness
- Accompanied parents
- Necessary procedure

Amber Collier, 28

- Old patient
- Admitted
- Enduring injury; acute infection
- Accompanied by best friend
- Elective (hair restoration); necessary (finger amputation)

APPENDIX D
Results Summary Tables

(1) Rapport Building (n=38)

Present rapport building (70%; n=27)	Physician initiated (59%; n=16)	Personal patient response (50%; n=8)
		Medical patient response (50%; n=8)
	Family initiated (26%; n=7)	At the expense of family member (57%; n=4)
		Through family member (43%; n=3)
	Patient initiated (15%; n=4)	
Absent rapport building (30%, n=11)	Focus on medicine (45%; n=5)	
	Lack of physician respect for patient (36%; n=4)	
	Lack of physician interest (18%; n=2)	

(2) Agenda Setting (n=38)

Present agenda setting (50%; n=19)	Outcome agenda (63%; n=12)	
	Process agenda (37%; n=7)	
Absent agenda setting (50%; n=19)	“Touch-and-Go” (42%; n=8)	Misunderstood conditions (75%; n=6)
		Worsening conditions (25%; n=2)
	Physician characteristics (37%; n=7)	
	Location of first visit (21%; n=4)	

(3) Information Management (n=38)

Present information management (55%; n=21)	Physician initiated, reciprocated by patient (86%; n=18)	Medical information (67%; n=12)
		Personal information (33%; n=6)
	Physician initiated, reciprocated by family member (14%; n=3)	
Absent Information Management (45%; n=17)	Lack of agenda setting (65%; n=11)	
	Physician disinterest/lack of effort (35%; n=6)	

Total Information Management (n=181)

Emotional needs (38%; n=69)	Active question (20%; n=14)	“You scared?”
	Passive statement (80%; n=55)	“No one says you’re going to die.”
Physical condition (31%; n=56)	Active question (20%; n=11)	“How does your head feel?”
	Passive statement (80%; n=45)	“You are considered a very high-risk patient.”
Patient satisfaction (18%; n=33)	Active question (55%; n=18)	“How’s your doctor treating you?”
	Passive statement (45%; n=15)	“I think you’ll be satisfied.”
Symptoms (13%, n=23)	Active question (83%; n=19)	“How long has your mouth been twitching like that?”
	Passive statement (17%; n=4)	“If you’re having symptoms, I can write you a prescription.”

(4) Active Listening to Understand the Patient's Perspective on the Illness (n=38)

Present understanding (95%; n=36)	Passive observation (75%; n=27)	Patient participation (33%; n=9)	
		Family participation (67%; n=18)	Rehashed (55%; n=10)
	Active listening (25%; n=9)		Presence (45%; n=8)
Absent understanding (5%; n=2)	Separation of life and illness (n=2)		

Action Following Successful Understanding (n=36)

Normalization (75%; n=27)	Legitimization (66%; n=18)
	No legitimization (44%; n=9)
Demean, devalue, and/or dissuade patient's perspective (25%; n=9)	

Action Following Identification of Patient Clues (n=38)

Internalized (76%; n=29)
Explored (24%; n=9)

(5) Addressing Feelings (n=38)

Feelings addressed (55%; n=21)	Normalization (86%; n=18)	Legitimization (72%; n=13)
		No legitimization (28%; n=5)
	Demean, devalue, and/or dissuade patient's feelings (14%, n=3)	
Feelings not addressed (45%; n=17)	Feelings expressed to others (47%; n=8)	
	Physician bias (47%; n=8)	Lack of interest (50%; n=4)
		Lack of respect (25%; n=2)
		Perceived futility (12.5%; n=1)
		Consent unnecessary (12.5%; n=1)
Trade-off (6%; n=1)		

Presence of Warmth (n=18)

Initial interaction (61%; n=11)
Relationship maintenance (39%; n=7)

(6) Negotiation to Reach a Common Ground

Present common ground (84%; n=32)	Effective skills: Reframing (53%; n=17)	View on life (59%; n=10)
		Rationality of emotions (41%; n=7)
	Effective skills: Patient-centered interaction (22%; n=7)	Communicatively (71%; n=5)
		Actively (29%; n=2)
	Effective Skills: Decision analysis (22%; n=7)	Clear surgical outcome (71%; n=5)
	Touch-and-go (29%; n=2)	
	Effective Skills: Brainstorming (3%; n=1)	
Absent common ground (16%; n=6)	Failure to understand patient's perspective (50%; n=3)	
	Lack of physician interest (50%; n=3)	

Hannah S. Lacko
Curriculum Vitae

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(845) 661-5116

Education: **M.A., Communication**
Wake Forest University Winston-Salem, NC Graduated: May 2011

Cumulative GPA: 3.87

Master's Thesis:

Examining *Grey's Anatomy*: A Content Analysis of Elements of Medical School
Communication Reform in a Popular Medical Drama
Advisor: Steve Giles, Ph. D.

B.A., Communication Studies

Concentration: Health Communication
James Madison University Harrisonburg, VA Graduated: May 2009

Graduated *Magna Cum Laude*, with Distinction
Cumulative GPA: 3.71 Major GPA: 3.69 Minor GPA: 4.0

Honors Thesis:

Cervical Cancer or HPV? Female College Students' Perceptions of and Reactions to
Gardasil Advertisements
Advisor: Sharlene R. Thompson, Ph. D.

Academic Honors:

- Health Communication Outstanding Student of the Year, 2009
- Dean's List: Fall 2006, Spring 2007, Fall 2008
- President's List: Fall 2007, Spring 2008, Spring 2009
- JMU Honors Program: an advanced program recognizing superior academic success, 2008-2009
- *Lambda Pi Eta*: National Communication Honor Fraternity, member since August 2007
- Golden Key International: International Honor Society, member since August 2008

Relevant Coursework:

- Health Communication
- Empirical Research Methods
- Doctor-Patient Interaction
- Introduction to Health Communication
- Health Communication Campaigns
- Organizational Communication
- Signs, Symbols, & Social Interaction
- Public Relations Techniques I: Writing
- Quantitative Communication Research
- Fundamental Human Communication

Academic Positions:

- Tutor, Wake Forest University Learning Assistance Center; tutored ten undergraduate students in statistics, communication research and writing, and sociological research and writing; Fall 2010 – Spring 2011
- Wake Forest University Argumentation Conference Coordinator, coordinated weekend-long communication event, including dining, transportation, and lodging; Spring 2010
- Research Assistant for Dr. Christine Robinson, assisted with sociological research and transcription; Spring 2009
- Teaching Assistant for SOCI210- Social Issues in a Global World, 65 students; Spring 2009
- Volunteer note-taker for Students with Disability Services; Fall 2008
- Health Communication Representative for the Student Advisory Group, worked to bring student concerns to the attention of the communication studies faculty; Fall 2008 – Spring 2009
- CHOICES Volunteer, lead campus tours for prospective admitted students; Spring 2006 – Spring 2008

Professional Experience:

- **Wake Forest University Baptist Medical Center, Winston-Salem, NC**
Department of Service Excellence Intern, August 2009 – May 2011
 - Managed patient satisfaction on seven inpatient units (102 beds) through conducting tri-weekly rounds and reporting patient comments to the Service Excellence Department and appropriate Unit Managers
 - Participated in all aspects of hospital-sponsored Focus Groups, including location and dining coordination, recruitment, and facilitation (both as an assistant and independently)
 - Supported the formation of the Patient-Family Advocacy Group, including researching similar groups from across the county, recruitment of members, and facilitation of the first meeting
- **Association for Health Communicators, James Madison University, Harrisonburg, VA**
Secretary/Treasurer, December 2007 - May 2008; Vice President, August 2008 – May 2009
 - Designed and implemented a health literacy training program for Health Sciences students at James Madison University
 - Promoted multiple aspects of healthcare within our college community and the city at large through volunteer work and health education
 - Maintained records for overall club funds and expenses, 100% accountability maintained
 - Developed creative fundraising ideas and delegated fundraising duties
 - Created brochures and handouts to recruit potential members, added seven members
- **Medecins Sans Frontieres/Doctors Without Borders, New York City, NY**
Communications & Press Intern, June – August 2008
 - Supported special events projects including the exhibit “A Refugee Camp in the Heart of the City”, the 2008 Nutrition Symposium, the 2008 AIDS Conference, and four recruitment sessions
 - Worked with the press team to expand awareness of humanitarian crises and endemic health problems in developing nations through press releases, guest panels, and educational materials
 - Monitored daily news coverage and conducted extensive media research