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## Cultivating Courage: Medical Dramas and Portrayals of Patient Self-Advocacy

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Cultivating Courage: Medical Dramas and Portrayals of Patient Self-Advocacy

by

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A thesis submitted in partial fulfillment  
of the requirements for the degree of  
Master of Arts  
with a concentration in strategic communication management  
The Zimmerman School of Advertising and Mass Communications  
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## Table of Contents

List of Tables .....	iii
List of Figures .....	iv
Abstract .....	v
Chapter One: Introduction .....	1
Chapter Two: Literature review .....	3
Physician-patient communication .....	3
Patient self-advocacy .....	5
Self-efficacy .....	8
College student health .....	9
Students as self-advocates .....	12
Cultivation theory .....	13
General to specific viewing .....	14
Spread of health information on TV .....	15
Misrepresentations in medical dramas .....	17
Patient self-advocacy in medical dramas .....	21
Cultivated college students .....	22
Rationale, hypotheses, and research questions .....	23
Chapter Three: Method .....	25
Sample and procedure .....	26
Stimulus .....	27
Measures .....	28
Patient self-advocacy .....	28
Medical drama exposure .....	30
Perceived realism .....	31
Preference for information subscale .....	32
Frequency of visits to healthcare professionals .....	33
Pilot test .....	34
Analysis .....	34
Chapter Four: Results .....	36
Chapter Five: Discussion .....	39
Theoretical implications .....	45
Limitations and future suggestions .....	46

Conclusion .....	48
References.....	50
Appendix A: IRB Approval Document .....	69
Appendix B: Questionnaire.....	70
Appendix C: Open-ended question coding categories.....	73

## **List of Tables**

Table 1: Results of independent sample t-tests for research questions and hypotheses ..... 37

Table 2: Mean, Standard Deviation, and Reliability for Independent Variable ..... 38

## List of Figures

Figure 1: Percentages based on the first open-ended question and both questions adding the “becomes proactive” category .....	30
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## Abstract

This study investigated the influence of medical dramas on perceptions of patient self-advocacy. With a purposeful sample of college students, the study explored perceptions of information seeking preferences of a medical drama patient. With a quasi-experimental design using an online questionnaire containing both qualitative and quantitative measures, the study was able to compare four unique variables to perceptions of the information seeking preferences of a medical drama patient. The study analyzed the influence that (1) medical drama exposure, (2) patient advocacy rating, (3) perceived realism of medical dramas, and (4) previous experience healthcare each had on college students' perceptions of the assertiveness of the medical drama patient. While the study did not yield statistically significant results it helps to inform cultivation theory by considering perceptions of patient self-advocacy and how they may influence medical drama viewers' health beliefs and behaviors. Future suggestions about scales to measure patient self-advocacy and perceptions of medical drama patients' health preferences are discussed.



## Chapter One: Introduction

Americans have been captivated by television (TV) since its introduction into society (Gerbner et al., 1982); and due to the wide-spread popularity of TV, Gerbner (1969) developed cultivation theory to determine the effects that TV might have on society's worldview. A key aspect of this theory is that long-term exposure to TV influences viewers' beliefs (Bilandzic & Busselle, 2008; Gerbner et al., 1982), whether the information is presented accurately or not. In essence, those who watch more TV are more likely to view the world as it is shown on TV (Gerbner, 1969). TV serves society for many different reasons, and while there is a multitude of topics represented on TV, some have greater influence on viewers' beliefs and behaviors than others. Health is one of these topics.

Americans rate TV "as their most important source of health news" (Lee & Niederdeppe, 2011, p. 736), and while society does tune into educational programs and news broadcasts, entertainment programs are noted to be a leading source of health information (Chung, 2014; Lee & Niederdeppe, 2011; The Pew Research Center, 2009). Moreover, the medical drama is one of TV's most popular genres of entertainment programs (Roman, 2005), increasing in popularity for decades (Davin, 2003). As a constant distributor of health information, medical dramas give viewers an inside look at the day-to-day lives of fictional healthcare professionals (Rocchi, 2019). Medical dramas cover a variety of health information which leads cultivation scholars to question the influence that medical dramas may have on viewers' health perceptions and beliefs (Chung, 2014; Foss, 2011; Harris & Willoughby, 2009; Hetsroni, 2009; Quick, 2009).

The topics and storylines presented in medical dramas can create inaccurate health beliefs based on the portrayals of physicians, underrepresentation of common health issues, overrepresentation of rare and dramatic health issues, and the lack of focus on preventative health information (Cho et al., 2011; Chung, 2014; Foss, 2011; Hetsroni, 2009; Quick, 2009; Tian & Yoo, 2018). However, an important health topic that has yet to be studied in the context of medical dramas is the portrayals and perceptions of health information seeking behaviors. Asking questions, seeking out health information, is a vital part of patient self-advocacy (Brashers et al, 1999), which is the act of one being involved in decisions regarding their healthcare (Volk et al., 2008). Self-advocacy is credited as a vital skill to ensure patients receive positive health outcomes and a greater quality of life (Ballard-Reisch, 1990), whether they have a chronic illness or not. Concepts of patient self-advocacy help to inform the current study, however, it is not a full examination of the topic. This study focuses solely on the patient self-advocacy skill of increased assertiveness (Brashers et al, 1999), which involves patients seeking health information during in-person medical encounters.

While research on medical dramas and patient self-advocacy is quite popular, there is little that connects the two. Due to the apparent importance of patient self-advocacy and the tendency for medical dramas to cultivate health beliefs in those with limited healthcare experience (e.g., young adults) (Quick, 2009), the purpose of this study is to explore the influence that exposure to medical dramas may have on college students. More specifically, using cultivation as a theoretical framework, this study considers college students' willingness to seek information during medical encounters and their perceptions of medical drama patients' health information seeking behaviors as well.

## Chapter Two: Literature Review

### Physician-patient communication

Open communication during medical encounters allows patients to feel more comfortable expressing concerns, asking questions, and suggesting solutions. Research shows that open communication between a physician and patient not only results in higher patient satisfaction but may lead to greater overall health outcomes and a better quality of life (Balint & Shelton, 1996; Wright et al., 2007; Young & Flower, 2002). The responsibility of establishing successful physician-patient communication falls on both the physician and patient. But with greater trust and open communication comes "higher quality decisions, greater commitment to decisions, increased satisfaction with interaction, and increased compliance with treatment regimens" (Ballard-Reisch, 1990, p. 94), all which leave patients with a greater satisfaction and quality of life (Street, 2001; Thompson, 1994).

Creating a mutual understanding and partnership between physician and patient, where they both have the same goals, leads patients to have more trust in their physician (Ratzan, 1993; Roter & McNeilis, 2003). In a study relating to patient assertiveness, communication, and satisfaction, Koermer and Kilbane (2008) reported that patients who established a personal connection and communicated openly during medical encounters had increased satisfaction with their physician. To achieve successful physician-patient communication it is key that physicians and patients have the same expectations when it comes to goals and health outcomes (Roter & McNeilis, 2003). This type of balanced communication between physician and patient is known as "mutuality," where the physician guides the patient and "values are explicitly articulated and

explored” (Roter & McNeilis, 2003, p. 123). However, effective and open communication between a physician and patient is not always easily accomplished (Berger et al., 2020; Dutta-Bergman, 2009; Emmers-Sommers et al., 2009; Ha et al., 2010; Ong et al., 1995; Roter & McNeilis, 2003); when there is ineffective or a lack of communication the opposite of mutuality can occur. This type of communication is described as “default” and is “where medical management may be least effective, with neither the patient nor the physician sensing progress or direction” (Roter & McNeilis, 2003, p. 123).

However, many factors come into play when physicians and patients are forming a relationship and communicating during medical encounters. While the physician does have an important role and must facilitate and encourage open communication (Ha et al., 2010), age, gender, education level, health knowledge, prior experience with healthcare, and overall health status all may influence how involved and communicative a patient is (Ong et al., 1995; Street, 2001; Thompson, 1994). For example, in terms of gender, Stewart (1984) found that men communicate less with their physicians than women do. And in a more recent study on communicating about sexual health during medical encounters, Emmer-Sommers et al. (2009) found that women are more likely than men to initiate conversations with their physicians, and physicians are more likely to communicate about such topics with women opposed to men.

Differing health beliefs and perceptions can also affect physician-patient communication. Platt and Keating (2007) discovered that gaps in perceptions about common infections and illnesses between physician and patient lead to poor communication and dissatisfaction with care; whereas agreement and good communication led to greater health outcomes. Nevertheless, it is important that patients and physicians are equally open to communication and engagement during medical encounters (Wiltshire et al., 2006).

## **Patient self-advocacy**

Engaging in and taking an active role in one's own healthcare, especially during medical encounters, is a form of self-advocacy. More specifically, patient self-advocacy is "the degree to which a patient takes a participative stance in healthcare decision making" (Volk et al., 2008, p. 5). This allows patients the chance to have their voice heard and take control (Hagan & Medberry, 2015). Patient self-advocacy requires a variety of skills and is said to most often be present in those who have a life-threatening or chronic illness (Borofka et al., 2015; Brashers, Haas, & Neidig, 1999; Hagan & Medberry, 2015; Hagan et al., 2018; Vessey & Miola, 1997; Volk et al., 2008; Wright et al, 2007).

"In the changing climate of 21<sup>st</sup>-century healthcare" (p. 100), Wiltshire et al. (2006) propose that all patients should take an active role in their healthcare. Patients who self-advocate report increased satisfaction with their physicians, less symptom burden, benefit more from medical encounters and have improved overall health (Brashers et al., 1999; Brody et al., 1989; Hagan et al., 2018; Salazar, 2018; Wiltshire et al., 2006). Though these outcomes that patient self-advocacy skills help create are undoubtedly beneficial for those with chronic illnesses, those without chronic illnesses should also take advantage of the benefits and self-advocate during medical encounters (Steinberg et al., 2002).

However, patient self-advocacy can be extremely difficult in a world where medical information, diagnoses, terminology, and much more can be confusing, especially for new patients or those who are new to managing their own healthcare (I.e., young adults). Maintaining control and navigating one's own healthcare not only requires a level of knowledge about possible diagnoses but also an awareness of one's health status and history. Patients need to be prepared and have certain skills to be successful self-advocates during medical encounters

(Vessey & Miola, 1997). Scholars describe patient self-advocacy as a skill that must be learned and requires practice to be successful (Hermansen-Kobulnicky, 2008; Walsh-Burke & Marcusen, 1999). Brashers et al. (1999) determined that patient self-advocacy encompasses three specific skills: increased illness education, potential for mindful nonadherence, and increased assertiveness. These three skills combined give patients the ability to self-advocate during a medical encounter (i.e., communicating with a physician or healthcare professional). *Increased illness education* refers to the willingness of patients to seek out information regarding their health. Brashers et al., (1999) state that having an “adequate level” of knowledge related to one’s health is a “prerequisite to a participative” stance during a medical encounter (p. 100). *Potential for mindful nonadherence* refers to a patient’s tendency to go against, or challenge suggestions made by healthcare professionals. Brashers et al. (1999) specifically define mindful nonadherence as the rejection of “treatments or a willingness to be nonadherent when treatments fail to meet the expectations of the patient” (p. 102).

While all three categories of patient self-advocacy skills are essential, this study is primarily concerned with *increased assertiveness*; which is defined as patients having an “increased desire for autonomy” (Brashers et al., 1999, p. 101) during interactions with their physician. In other words, “asking questions” is referred to as a main indicator of increased patient assertiveness (Brashers et al, 1999; Cegala et al., 1996; Roter & Frankel, 1992). More specifically, when patients speak up and make their wishes, questions, opinions, and the like known during a medical encounter they are declaring a level of assertiveness that allows them to be self-advocates.

It is common for research on patient assertiveness to involve those with a life-threatening or chronic illness. Such research has found that when patients are assertive during medical

encounters there is an increase in patient satisfaction and health outcomes (Brashers et al., 2017; Bylund et al., 2010). For example, Brashers et al. (2017) found that patients with HIV were able to improve healthcare satisfaction when they self-advocated by engaging in assertive behaviors. In addition, patients with multiple sclerosis reported being engaged during medical encounters and having open communication about their psychological wellbeing lead to greater physician satisfaction and health outcomes (Senders et al., 2016). However, patient assertiveness is helpful to all patients during medical encounters, not only those with chronic illnesses. In a study on patient assertiveness using a large sample of college students, Salazar (2018) found that increased knowledge about one's health and assertiveness during medical encounters positively impacts patient satisfaction. Salazar (2018) notes that assertive patients "feel more confident in their ability to initiate conversations by asking direct questions and listening effectively during conversations with their physicians" (p. 576).

While being an assertive and inquisitive patient allows for a more active role in one's healthcare and more engagement in the decision-making process, many patients do not put themselves in this position (Brashers et al., 1999; Wiltshire et al., 2006). Roter and Frankel (1992) found that 91% of the time physicians are the ones to ask questions and engage during a medical encounter. A reason that patients may not engage and ask questions could be that "they think it is inappropriate for them to do so, or because they do not wish to challenge the doctor's authority" (Robinson & Whitfield, 1985, p. 916). The disproportion of power between patients and physicians may be an additional reason for patients' reluctance to ask questions and acquire more information about their health (Brashers et al., 1999).

However, that may be an outdated perspective as in recent years the physician-patient relationship has changed from paternalistic, with the physician as the decision maker, to

consumeristic, where the patient has total control over their healthcare (Emmers-Sommer et al., 2008; Roter & McNeilis, 2003). Vogenberg and Santilli (2018) suggest that physicians should act as “the primary source for education, information, and the tools that patients need to take ownership of their health” (p. 48), opposed to acting as the main decision makers. Research shows that age may be a factor in patient assertiveness; older patients are more comfortable with their physicians making decisions for them than younger patients (Bailoor et al., 2018; Cole et al., 2017). Bylund et al. (2010) note that for patient assertiveness to be successful the physician must see patient engagement as a positive act, not as argumentative or disrespectful. Patient assertiveness is most effective when the physician is open to suggestions, questions, opinions and increased engagement and information seeking from the patient (Brashers et al. 1999; Bylund et al., 2010).

Overall, research shows that when patients exert any type of assertiveness; for example, asking questions, engaging in conversations, or actively listening to their physician, they have a higher level of satisfaction with their physician and overall health experience (Roberts & Aruguete, 2000; Wanzer et al., 2004). At any level, increased assertiveness allows patients to advocate for themselves during a medical encounter, becoming more involved in decisions surrounding their healthcare ensuring that their needs are being met.

**Self-efficacy.** Because personality traits, level of knowledge, nervousness, confidence, and age can all play a role in a patient’s ability to be assertive (Brashers et al., 1999; Wiltshire et al., 2006; Wright et al., 2007), it is important to note the role self-efficacy plays in a patient’s ability to be involved with their healthcare. Self-efficacy is defined as a person’s ability to carry out a behavior (Bandura, 1977), and has been thoroughly researched in terms of health and patient involvement (Bruera et al., 2002; Guadagnoli & Ward, 1998; Kim & Hmielowski, 2017;



Manganello & Clayman, 2011; Stewart et al., 2000). Different traits, life experiences, values, and beliefs all influence a person's level of self-efficacy (Rimal, 2000), which is needed to communicate effectively during medical encounters. Maibach and Murphy (1995) explain that when one has a higher sense of self-efficacy, they are more likely to overcome setbacks and persevere. However, a lower sense of self-efficacy has been attributed to less effort and adherence of certain health behaviors (Maibach & Murphy, 1995).

In a study about knowledge of health behaviors, Rimal (2000) found that self-efficacy was a mediator between knowledge of a health behavior and acting on the behavior; as the correlation between one's knowledge and behavior increased so did their self-efficacy. In a similar study to assess the patients' self-efficacy during medical encounters, Clayman et al. (2010) discovered that patients with low health literacy had lower self-efficacy which affected their ability to "obtain, understand, and recall information from their physicians" (p. 73).

### **College student health**

College is a pivotal time in a young adult's life when it comes to creating health-related beliefs and behaviors (Lipnickey, 1988; Sharkey et al., 2017; Viner et al., 2012; Traino, 2019). The newfound freedom that most young adults have also comes with responsibility, which is especially important in healthcare (Lau et al., 1990). In college, young adults are exposed to and may develop dangerous behaviors, like smoking, drinking, eating a poor diet, and not getting enough sleep, that could become habits, damaging their health in the future (Henry et al., 2018; Lau et al., 1990; Lund et al., 2010; Sax, 1997).

Manganello and Clayman (2011) note that young adults are, possibly for the first time, making their own healthcare decisions as "they are no longer under regular supervision from parents or guardians" (p. 165). Further suggesting that it is a pivotal time to ensure that "young

adults are able to function within the health care system at a high level” (Manganello & Clayman, 2011, p. 165). Furthermore, Sharkey et al. (2017) explain that college students “experience increasing academic challenges and environmental adjustments, especially if students move away from home” (p. 952). Research shows that the challenges and stressors young adults face in college may have a permanent impact on their physical and mental health, (Hudd et al., 2000; Lund et al., 2010). Thus, it is vital that young adults have the necessary knowledge and skills to lead a healthy life.

In a study of more than 400 college students, Sharkey et al. (2017) found that those with greater healthcare management skills reported having a greater quality of life relating to both physical and mental health. On the other hand, research connects a lower health-related quality of life with negative health outcomes that affect academic success and may lead to other dangerous health behaviors that are common among college students (DeBerard et al., 2004; Sharkey et al., 2017; Zahran et al., 2007). Existing literature shows that healthcare management skills, like competent communication and medication management (Sharkey et al., 2017), allows all young patients, not just those with a chronic illness, to have a greater quality of life (McDonagh et al., 2006; Sharma et al., 2014).

In addition to young adults in college having to adjust to many new responsibilities and experiences, they are also a group that has particularly higher instances of poor health when compared to other generations (Edwards et al., 2006; Grace, 1997). As young adults are no longer adolescents, yet not fully considered adults, they “often fall between the gaps of pediatric and adult services” (Edwards et al., 2006, p.146). Consequently, this lack of a specified place in healthcare can lead to difficulties in young adults building experience and confidence dealing with their own healthcare (Edwards et al., 2006).

Moreover, Grace (1997) states that “young people are recognized as a special population that experiences higher rates of morbidity, disability, and mortality than the general population does from certain health risk behaviors” (p. 248). When compared to a younger age group of teenagers ages 12 to 17, the mortality rate for young adults aged 18 to 24 is twice as high (Park et al., 2006). In addition, research shows that more young adults (38%) lack health insurance than older generations (Taylor & Keeter, 2010). College students in particular are susceptible to unhealthy behaviors that lead to common health issues (Henry et al., 2018). For example, research shows college students lack proper nutrition, frequently eating fast food and not including fruits and vegetables into their diets (American College Health Association, 2015), which is associated with chronic diseases such as diabetes and heart disease (National Center for Health Statistics, 2013).

Acute and chronic illnesses are becoming increasingly more common among college students (Elflein, 2020; Henry et al., 2018), as there are many opportunities for viruses and infections such as influenza and mononucleosis to spread quickly on campuses. More specifically, in a study with more than 3,000 college students, Nichol et al. (2005) found that 91% of students had at least one upper respiratory infection in a period of six months. While young adults in college may face similar health issues that those in the rest of the population face, a multitude of research shows them to be a unique population, indicating a need for young adults to acquire necessary skills to navigate their own healthcare and make wise choices, ultimately allowing them to have a greater health-related quality of life (Lipnickey, 1988; Manganello & Clayman, 2011; McDonagh et al., 2006; Sharkey et al., 2017; Sharma et al., 2014; Traino, 2019; Viner et al., 2012).

**Students as self-advocates.** College students acting as self-advocates have been studied in various ways. In a formative study about the use of self-advocacy in an education setting, Daly-Cano et al. (2015) found that there is a “significance of teaching and reinforcing self-advocacy skills to youth well before they prepare to enter postsecondary settings” (p. 224). Kimball et al. (2016) also studied college students and the importance of self-advocacy and found similar results. They found that college students with learning disabilities who engaged in activism, and advocated for their academic needs, were able to reduce stigma and “learned that advocacy skills were essential life skills” (Kimball et al., 2016, p. 251).

Self-advocacy has also been researched in terms of young adult health. Young adult as patient self-advocates is most often studied in the context of those with a chronic illness and their readiness to transition into managing their own health (Stewart et al., 2017). Most children who grow up with a chronic illness commonly had parents acting as their advocates, making most of the decisions about treatments and healthcare (Stewart et al., 2017). However, as these individuals get older, they need to prepare to navigate their health on their own. This transition is a specifically-defined, purposeful process that a young adult with a chronic illness goes through to transition into an adult form of healthcare (Blum, 2002). While these studies concerned self-advocacy in various contexts, a common finding is that training is necessary for successful self-advocacy (Daly-Cano et al., 2015; Kimball et al., 2016; Stewart et al., 2017). For anyone to be a self-advocate, specifically college students, they need to not only have accurate information (Wiltshire et al., 2006), but also practice the skills required for self-advocacy (Hermansen-Kobulnicky, 2008).

## **Cultivation theory**

As new forms of media gain and lose popularity, TV remains consistent. It is used by millions and is engrained in lives and cultures, making it one of the most widely used mediums across the globe (Ward et al., 2016). Morgan and Signorielli (1990) noted that people spent more time watching TV than they did on any other activity, not including sleeping and working. This holds true 30 years later, as Americans still spend a considerable amount of time watching TV (Nielsen, 2020a). Since the messages on TV spread across the globe to millions of people, scholars question what effect long-term exposure to TV has on viewers.

With this notion, Gerbner (1969) sought to study the effect that TV violence had on viewer perceptions of the real world. He discovered that those who watched more TV had a pessimistic and false view of the world, thinking it was more dangerous than it actually was. As well as cultivating viewers to have distorted interpretations of the violence in the world, Gerbner (1969) found that the amount of TV one watched was directly related to the inaccuracy of their views. More specifically, those who were heavy viewers of TV were more likely to see the world and society as dangerous and violent. Heavy viewers are defined as those who watch four or more hours of TV daily, opposed to light viewers who watch two hours or less daily (Dainton & Zelle, 2005).

Gerbner (1969) developed cultivation theory to predict the effects and influences that long-term exposure to TV has on society's perceptions of reality. Cultivation theory hypothesizes that those who are heavy viewers of TV have a more unrealistic and false view of the world, than those who are light viewers. Cultivation theory is based on the notion that general exposure to TV, over an extended period of time (i.e., a lifetime), can influence perceptions and beliefs (Gerbner et al., 1980; Signorielli et al., 2019). It is founded in the idea that TV programs

present “overarching messages about good and bad, about what matters in the world and what does not, and about who is powerful and who is not” (Busselle & Van den Bulck, 2019, p. 70). Since TV is a primary source of information and a key disseminator of messages to society (Gerbner et al., 1980), Signorielli et al. (2019) state that there are universal and constant “cultural themes, images, lessons and values that cut across many genres” (p. 114). Because of this Gerbner et al. (1980) found that people are constantly bombarded with extreme exposure to similar stories, thus creating a symbolic world for TV viewers to live in.

**General to specific viewing.** As proposed by Gerbner et al. (1980), cultivation theory is meant to focus on general TV viewing over long periods of time, and is not concerned with the effects of specific genres or programs (Signorielli et al., 2019). That may remain true with the original development of the theory, however, viewing habits, messages, and TV have changed considerably since Gerbner introduced the theory. Recently, scholars have begun to critique the foundation of cultivation theory (Bilandzic & Busselle, 2008; Bilandzic & Rossler, 2004; Busselle & Van den Bulck, 2019). Furthermore, it is believed that the cultivation of perceptions can take place from extreme exposure to specific genres and programs (Bilandzic & Busselle, 2008), not just solely from overall TV exposure. The importance of genre-specific research is argued because of the vast differences in messages that genres produce (Bilandzic & Busselle, 2008; Bilandzic & Rossler, 2004).

For example, Lett et al. (2004) found that excessive viewing of news coverage on the September 11, 2001 attacks was associated with “negative personal emotions, positive views of Islamic individuals in general, and negativity of personal relationships with Islamic peers” (p. 39). Heavy viewing of popular, prime-time TV programs was also found to have a cultivation effect. Women who watched top-rated programs, which are notorious for showing actresses that

have unrealistically thin figures (Harrison, 2003; Silverstein et al., 1986), were more likely to think of their ideal-body size as thin (Harrison, 2003). It was also discovered that both men and women who watch popular TV programs are more likely to approve “of surgical body-alteration methods such as breast surgery and liposuction” (Harrison, 2003, p. 263) to achieve their ideal-body type. Exposure to prime-time TV has also been studied in the context of health beliefs and perceptions of healthcare professionals. Pfau et al. (1995) found that those who watch more prime-time TV perceive physicians “as more likely to be female and young” (p. 441) and are more interested in the character’s attractiveness than their actions as on-screen physicians.

Specific genres and programs should be a focus of cultivation research due to the idea that heavy viewers of certain genres are exposed to more messages at a much faster and concentrated rate (Bilandzic & Rossler, 2004). As technology advances, so do viewing habits. With the introduction of streaming services, viewers do not have to wait for programs to air and can watch any program at any time (Umstead, 2014). This ease of access increases viewership and leads to “binge watching” multiple episodes of a specific program without stopping. This leaves viewers to be constantly exposed to messages and storylines that can cultivate false perceptions. Although years of general TV exposure does result in cultivation effects, extreme exposure to specific genres and TV programs that spread consistent messages is a grave concern, as those who are heavy viewers are extremely susceptible to cultivation effects.

**Spread of health information on TV.** The average American adult spends about 35 hours a week watching TV (Nielsen, 2020a). Those who are heavy viewers receive most of their education and entertainment from this medium (Gerbner et al., 1980). While most popular forms of media serve as sources of health information to society, TV is the most prevalent (Ye & Ward, 2010). Dutta et al. (2017) note that TV covers an array of health topics such as diet, cancer,

obesity, tobacco use, nutrition, and drugs. Specifically, scholars are concerned with health-related information and messages that are spread on TV (Gerbner et al., 1982; Hetsroni, 2009; Kline, 2003). Whether it be from medical dramas or health segments on a local news program, “understanding the health effects of TV is pivotal, considering that TV and the structures that constitute TV content set the agendas for many health topics, often disseminating negative and positive messages that can impact society” (Dutta et al., 2017, p. 1).

Popular entertainment TV programs are noted to be useful modes of disseminating health information to society (Park & Reber, 2010). Medical information related to treatments, medications, and technological medical developments shown through entertainment media help shape lay viewers’ perceptions and beliefs about their own health and the health of society (Hetsroni, 2009). But there is a somewhat dangerous propensity in viewers to rely on media to provide accurate health information (Jason, 1998). Hetsroni (2009) notes that this dependency on media can increase because “the more unclear the messages from non-media sources [are], the more heavily people lean on the mass media” (Hetsroni, 2009, p. 2). A possible explanation for an increased reliance on media to provide health information may be attributed to the fact that healthcare providers are not the best at giving patients the quality information they need to make well-informed healthcare decisions (Woolf et al., 2005). Radio and newspaper are frequently cited as sources of health information for lay people; but when it comes to TV, entertainment programs remain a more popular source than local or broadcast news (Chung, 2014; Lee & Niederdeppe, 2011; The Pew Research Center, 2009). Popular entertainment programs (i.e., prime-time TV) are watched religiously by people across the country (Krantz-Kent, 2018).

The medical drama is an extremely popular genre that has received a considerable amount of attention from cultivation scholars (Cho et al., 2011; Chung, 2014; Dutta et al., 2017;



Foss, 2011; Harris & Willoughby, 2009; Lee & Taylor, 2013; Tian & Yoo, 2018; Ye & Ward, 2010). Medical dramas consist of storylines that focus around healthcare professionals and health-related topics (Rocchi, 2019). For example, *Grey's Anatomy*, TV's longest running medical drama, follows the lives of a group of surgical interns (Strauman & Goodier, 2008), and commonly attracts more than 12 million viewers on a weekly basis. For decades, the popularity of medical dramas has grown, and they have become one of the most-watched genres and a leading part of American prime-time TV (Roman, 2005; Ye & Ward, 2010).

Medical dramas give viewers, many of whom have little to no healthcare experience, an inside look at the day-to-day lives of physicians, new health topics (Center for Disease Control and Prevention, 2001), and ultimately “provide viewers uniquely vivid and tactile experiences of health care” (Chung, 2014, p. 334). However, viewers who have less health-related knowledge and little experience in healthcare settings (e.g., spending time in doctors' offices or hospitals) are more likely to be susceptible to cultivation effects (Quick, 2009). Hetsroni's (2009) study revealed 70% of respondents stated that most of their health knowledge came from medical dramas. Busselle (2001) posits that this cultivation effect is due to the easily retrievable information provided by medical dramas in a viewer's memory.

**Misrepresentations in medical dramas.** There is an assumption that medical dramas have a level of clinical accuracy and most do have expert advisors to help ensure this (Davin, 2003; Turow, 1989). But due to the dramatic nature of this fictional genre, storylines often inaccurately represent health information, and research shows just how incorrect portrayals on medical dramas can be (Chory-Assad & Tamborini, 2003; Hetsroni, 2009; Quick, 2009; Strauman & Goodier, 2008). The storylines and settings of medical dramas seem more like dramatic war zones than emergency rooms, where unrealistic and uncommon injuries and

illnesses are at the epicenter of every episode (Hetsroni, 2009). Gerbner et al. (1982) note that the most common and life-threatening illnesses are left out of most medical drama storylines. It is not uncommon at all for medical dramas to focus on dramatic diseases that do not represent the health issues that a majority of society actually faces (Chung, 2014). This misrepresentation of health information poses a real risk to heavy viewers of medical dramas. As cultivation theory postulates, those who are heavy viewers of medical dramas would be more likely to hold false health beliefs and perceptions (Shanahan & Morgan, 1999; Wählberg & Sjöberg, 2000).

*Grey's Anatomy* is well known for its dramatic storylines and physicians' abilities to solve the most complex and extreme medical cases. In a review of *Grey's Anatomy's* health topics and storylines, Strauman and Goodier (2008) accurately note that each episode has at least two extraordinary and rare medical cases folded in to the dramatic storyline. To name a few, the program portrays cases as extreme as a pregnant man, a patient with a homemade explosive stuck in his abdomen, and a little girl who is allergic to the sun. While these cases might seem very unlikely and fake, *Grey's Anatomy*, as well as other medical dramas, do a near-perfect job of making not-so-ordinary cases look very real.

While it might be the most popular, *Grey's Anatomy* is not the only prime-time medical drama to inaccurately portray diseases, physicians, and healthcare in general. Other medical dramas, such as *House*, frequently provide viewers with inaccurate health information and misrepresentations (Strauman & Goodier, 2008). In a national survey, Chung (2014) found that those who are heavy viewers of medical dramas underestimate the prevalence and seriousness of common chronic diseases. This finding is attributed to that fact that there is an extreme emphasis on dramatic and rare illnesses in medical dramas. These dramatic storylines leave viewers with false perceptions that lead them to be worried about the rare illnesses shown on TV rather than

much more common diseases like cancer and heart disease (Chung, 2014); when in reality, the leading cause of death in America is heart disease, followed by cancer (Center for Disease Control, 2017).

Due to the ever-growing popularity of medical dramas, Hetsroni (2009) conducted a study that compared patient results in prime-time medical dramas to actual patient outcomes from hospital data. The study showed the extent to which medical dramas inaccurately represent common diseases and mortality rates. It was found that the survival rate of patients in medical dramas was significantly lower than the survival rate of hospitalized patients in the real world (Hetsroni, 2009). This misrepresentation portrays hospitals as an extremely dangerous place, one where someone goes to die. The low survival rates and prevalence of rare diseases sends a message to heavy viewers that “can provoke fear, particularly among persons without a background of hospitalization” (Hetsroni, 2009, p. 319).

Extreme and long-term exposure to medical dramas cultivates unrealistic viewpoints of survival rates, leaving heavy viewers with fatalistic beliefs and depressing thoughts about preventing death (Chory-Assad & Tamborini, 2003). While these programs are made to be suspenseful and garner attention, inaccurate representation can negatively alter heavy viewers’ health beliefs and perceptions of society. This is especially true when fictional physicians and characters become a key source of health information for heavy viewers (Hetsroni, 2009).

Another misrepresentation frequently portrayed in medical dramas is the lack of medical errors made by physicians. Although medical errors happen often in the real world (Gibson & Singh, 2003), it was found that medical dramas rarely show physicians making mistakes (Foss, 2011). They are instead shown as heroes who rarely fail. However, this leaves viewers with little

health experience with the belief that physicians are nearly perfect and therefore are left unprepared if a medical mistake happens to them or a loved one (Foss, 2011).

Using cultivation theory, Quick (2009) found that heavy viewers of *Grey's Anatomy* perceive the program to be a credible source of health information. Also, because the program depicts physicians as extremely brave and flawless, viewers “perceived doctors in general to be courageous” (Quick, 2009, pg. 50). It was found that with a positive view of physicians, viewers were more satisfied with their own healthcare. The notion that viewers consider medical dramas to be accurate sources of health information was also verified in a survey of 500 *Grey's Anatomy* viewers. Almost 30% reported believing the show to be very accurate, and more than half of the respondents stated that they believed the show to be somewhat accurate (Rideout, 2008).

As well as perceived credibility of medical dramas, perceived realism also directly relates to perceptions cultivated by these programs (Ferris et al., 2007; Rubin et al., 1988). Perceived realism is described as the degree to which viewers believe the topics and information presented on TV to be real (Busselle, 2001). Therefore, those who perceive the topics portrayed in medical dramas to be real are more likely to hold beliefs directly correlated to these topics, whether they are actually true or not (Cho et al., 2011). Cho et al. (2011) adapted Hall's (2003) framework on perceived realism to test medical drama viewers. This framework consists of three dimensions: (1) perceived plausibility, the “degree to which TV portrayals of people, behaviors, and events could occur in real life” (Cho et al., 2011, p. 143); (2) perceived typicality, which “refers to the degree to which TV portrayals appear to fall within the range of a viewer's personal and social experience” (Cho et al., 2011, p. 143); and (3) perceived narrative consistency, which is the “degree to which an event portrayed on TV is coherent” (Cho et al., 2011, p. 143). They discovered “the dimensions of perceived realism are important factors to consider in

understanding TV medical dramas' influence on perceptions" (Cho et al., 2011, p. 146). The concept of perceived realism is frequently researched and stated to be an important factor in determining the influence that TV has on viewers' beliefs (Cho et al., 2011; Perse, 1986; Tian & Yoo, 2018).

**Patient self-advocacy in medical dramas.** Decades of research has shown the influence that watching TV has on individuals' health beliefs and behaviors, as the messages that are presented on TV may be the only way viewers are exposed to certain information (Chung, 2014; Gerbner et al., 1982; Silverstein et al., 1986; Quick, 2009). Just as topics relating to surgical information, disease prevalence, medical errors, physician credibility, and overall patient satisfaction are portrayed in medical dramas (Chung, 2014; Foss, 2011; Hetsroni, 2009; Quick, 2009), so is patient self-advocacy. Patient self-advocacy has been shown in different ways: from physicians telling their patients the need for self-advocacy, to physicians self-advocating during their own health issues, to the importance of women advocating for their own health (Hirt et al., 2012; Maple, 2018; Riegle & Bernabe, 2019). These portrayals of patients in medical dramas as self-advocates are valuable to viewers who may not have experience with similar healthcare situations (Hirt et al., 2012). But while medical dramas frequently show patients as self-advocates, they are oftentimes portrayed as confident, all-knowing patients who exhibit perfect self-advocacy skills.

Unfortunately, this is not the reality as most patients "are hesitant to lead their care, engage in health information, and lead decision-making. Even if the value of self-advocacy is recognized as a positive ability, patients may lack the willingness or the capacity to fully participate at the level expected of a model self-advocate" (Hagan & Medberry, 2015, p. 380). With the lack of patient self-advocacy in the real world, medical dramas still do not show

patients learning self-advocacy skills, which is essential to becoming a self-advocate (Hermansen-Kobulnicky, 2008). This puts viewers at a disadvantage when they are shown only one side of the story, where the patient is portrayed as all-knowing and receives a more than perfect health outcome. The misrepresentation of perfect patient self-advocacy could lead to inaccurate beliefs that being a patient self-advocate comes easily or even naturally.

### **Cultivated college students**

An increased level of knowledge is necessary to make informed decisions and to be prepared for healthcare situations (Wiltshire et al., 2006). Since college students may not have experience with the healthcare system or managing their own health (Quick, 2009), they turn to media as sources of health information (Lee & Taylor, 2013). This can leave them at a great risk for forming unhealthy beliefs and behaviors that are often shown in the media (Austin et al., 2012). Austin et al. (2012) note that “the media environment includes often-frightening coverage from entities employing dramatic strategies intended to attract a large market share. As a result, students need to be able to distinguish real threats from exaggerated or inaccurate ones” (p. 553).

Quick (2009) suggests that college students are a population that “presumably have little experience” (p. 43) in healthcare situations and are therefore a group that can be at risk for cultivation effects. In a study on the portrayal of cardiopulmonary resuscitation (CPR) in medical dramas, Alismail et al. (2018) found that college students, not majoring in healthcare or medicine, were greatly influenced by medical dramas. A similar study regarding college students and medical dramas found that college students’ motives for viewing medical dramas “included information, social interaction, habitual pastime/companionship, entertainment, and relaxation” (Lee & Taylor, 2013, p. 19). While this is a wide range of motives, it is important to note a main finding is that college students “seek out health- or medical-related information as they watch

medical dramas” (Lee & Taylor, 2013, p. 19). Overall, repeated exposure to content in medical dramas that inaccurately represents health information, along with lack of health experience, leaves viewers to create corresponding perceptions of health that are not backed by research (Wählberg & Sjöberg, 2000). This can be detrimental to college students’ health beliefs and possibly lead them to make misinformed healthcare decisions.

### **Rationale, hypotheses, and research questions**

Just as medical dramas influence viewer’s beliefs relating a variety of health topics, the portrayal of patient self-advocacy skills throughout medical dramas may influence viewers’ beliefs as well. While studies have found that increased viewership of medical dramas effects perceptions of health topics like physician credibility, prevalence of common diseases, and medical errors (Chung, 2014; Foss, 2011; Quick, 2009), there is a lack of research regarding medical dramas and topics related to patient self-advocacy. All self-advocacy skills positively benefit patients, chronically ill or not (Brashers et al., 1999; Wiltshire et al., 2006). However, the current study explores the relationship between medical drama viewership and health information seeking behaviors through the lens of increased assertiveness, a vital patient self-advocacy skill, which involves patients being assertive during medical encounters by asking questions and seeking health information (Brashers et al, 1999; Cegala et al., 1996).

Due to the ability of medical dramas to cultivate perceptions and beliefs in viewers with little healthcare knowledge, utilizing cultivation as a theoretical framework, this study examined how college students perceive the necessary patient self-advocacy skill of seeking information during medical encounters. With this notion, the current study investigated the following research questions.

**RQ1:** To what extent does patient advocacy rating affect perceived information seeking preference of the medical drama patient?

**RQ2:** To what extent does frequency of visits with a health care professional affect perceived information seeking preference of the medical drama patient?

Previous literature suggests that medical dramas commonly provide inaccurate portrayals of various health topics (Cho et al., 2011; Chung, 2014; Foss, 2011; Hetsroni, 2009), thus leading heavy viewers of medical dramas to create misinformed health beliefs and perceptions. In addition, medical dramas have a tendency to portray patients as having excellent self-advocacy skills (Hirt et al., 2012; Maple, 2018). However, that is not representative of how patients act in the real world (Brashers et al., 1999; Hagan & Medberry, 2015; Wiltshire et al., 2006). Thus, the first hypothesis is advanced:

**H1:** Viewers of medical dramas will rate the perceived information seeking preferences of the medical drama patient lower than non-viewers of medical dramas.

Past studies show that greater perceived realism of medical dramas lead viewers to believe that the topics presented in medical dramas are an accurate representation of the real world (Busselle, 2001; Cho et al., 2011). Although, the tendency for medical dramas to portray patients as nearly perfect self-advocates (Hirt et al., 2012; Maple, 2018; Riegle & Bernabe, 2019) is not an accurate representation of the real world (Hagan & Medberry, 2015). Therefore, the second hypothesis suggests that:

**H2:** Perceived realism will predict negative perceptions of the information seeking preferences of the medical drama patient.



### Chapter Three: Method

This study used a quasi-experimental design with an online questionnaire containing both qualitative and quantitative measures to assess the influence that medical dramas may have on college students' health seeking behaviors and their perceptions of medical drama patients' health seeking behaviors during medical encounters. Questionnaires are frequently used as a method to study cultivation effects, as well as patient advocacy. Using questionnaires, communication scholars have studied the cultivation effects of medical dramas on topics such as physician credibility, seriousness of chronic diseases, college students' perception of CPR, trust in medical professionals, and perceived realism of health information (Alismail et al., 2018; Cho et al., 2011; Chung, 2014; Quick, 2009; Tian & Yoo, 2018).

Questionnaires have also been a valuable method when studying perceived patient self-advocacy and health information seeking across various populations and topics. For example, those with chronic illnesses, long-term cancer survivors' quality of life, the usefulness and drawbacks among patients and providers, effects on symptom burden among female cancer survivors, college students' willingness to communicate about health, effects on patients' self-compassion, and the use of patient self-advocacy for those with racial/ethnic differences (Borofka et al., 2015; Brashers et al., 1999; Hagan et al., 2017, 2018; Salazar, 2018; Wiltshire et al., 2006; Wright et al., 2007). Therefore, using valid and reliable measures, this exploratory study utilized an online questionnaire to establish medical drama viewership, perceived patient advocacy, and preferences for seeking information in healthcare situations.

## Sample and procedure

As an exploratory study, a nonprobability, purposive sample of college students between 18 and 25 years of age (Simpson, 2018) was recruited for this study. To achieve this, undergraduate students enrolled in mass communication courses at a large Southeastern university were recruited via an announcement from course instructors. Students earned extra credit for participating in the study, and students who did not wish to participate were offered an alternative assignment in order to earn the same amount of extra credit. Before completing the online questionnaire, respondents provided informed consent, were made aware that their participation was voluntary, and that they could exit at any time. The study was approved by the Institutional Review Board.

A total of 242 participants attempted the questionnaire. However, after the attention check questions (explained on pp. 27-28 in the stimulus section), there were 208 completed responses. Once removing the data for those who were not in the proper age group (those over 25 years of age) there were 195 responses. After removing data outliers (explained on p. 34 in the pilot test section), as an additional attention check there were 176 useable responses. The average age of the sample was 20.16. Females comprised 67% ( $n = 118$ ) of the sample, males represented 30.1% ( $n = 53$ ), and 2.8% ( $n = 5$ ) reported as non-binary/third gender or preferred not to say.

Respondents who gave informed consent completed the online questionnaire administered through Qualtrics. In the first part of the questionnaire, respondents were presented with a measure regarding their healthcare involvement and a written hypothetical scenario used to classify perceived patient self-advocacy (see measures for written scenario statement). Respondents answered two open-ended questions, then proceeded with the remainder of the questionnaire which collected quantitative data and showed the stimulus video. After completing

the questionnaire, respondents were redirected to a separate questionnaire where they filled out a form allowing them to receive extra credit for the course from which they were recruited. To maintain anonymity the extra credit questionnaire was not connected to the data.

### **Stimulus**

An approximately 4-minute video containing a compilation of scenes from popular medical drama *The Resident* (season 2, episode 17) was used as the stimulus for this study. The episode was edited for brevity so that only scenes from one storyline would be shown. The video was not manipulated in any manner. The episode was selected for its relevance to college students and dramatization of healthcare scenes. The stimulus video focused on Infectious Mononucleosis (IM), generally known as mono, which is primarily caused by the Epstein-Barr virus and very common among college students (Crawford et al., 2006; Harmon et al., 2016). More specifically, IM's symptoms include "fever, sore throat, lymphadenopathy/enlarged lymph nodes, and fatigue" (Harmon et al., 2016, p. 1), all which may lead college students to become less productive resulting in dropped classes and extra-curricular activities (Rea et al., 2001).

The clip featured two college students who visit the hospital's clinic and are diagnosed with mononucleosis. While one student is fine and told she may go home to rest, the other's symptoms worsen and he is admitted to the hospital. The clip goes on to show the male patient getting sick very quickly while medical tests and procedures are discussed by the nurse and physician. To ensure that respondents watched the stimulus video, an attention check question was asked. Immediately following the video, respondents were asked what major (engineering) the male patient is studying in college. If that question was answered correctly, they were able to move on to complete the remainder of the questionnaire. However, if it was answered incorrectly, they were presented with a second attention check question asking what the

relationship (friend) is between the male patient and female who went with him to the clinic, and then the hospital. If the second attention check question was answered incorrectly, respondents were unable to complete the rest of the questionnaire and their data was discarded.

## Measures

The questionnaire (see Appendix B) measured medical drama exposure, patient advocacy, and two scales to assess perceived realism of medical dramas and perceived health information seeking preferences of a medical drama patient. Additionally, a direct measure of number of visits with a healthcare professional and demographic questions were included. To prevent an ordering effect, questions about medical dramas were asked at the end of the questionnaire (Quick, 2009), and questions about respondents' healthcare involvement were asked at the beginning.

**Patient advocacy.** Based on Martin et al.'s (2011) study on patient advocacy and skills, a written hypothetical scenario was presented to respondents before watching the stimulus video. The scenario was loosely based on the events shown in the stimulus video but was written in the point of view on the respondent as the patient. All respondents were presented with the following statement.

“You and your friend have been studying all week for an important final exam. You've been eating junk food and not getting much sleep. You both start to feel like you're coming down with something. You feel tired, feverish and have a sore throat. To make sure it's nothing too serious before your final exam, you both go to the health center to get checked out in-person. After being seen by a nurse, you wait before returning to an exam room. The nurse says that the good news is you both can ask for an extension on your final exam; but the bad news is you both have mononucleosis (Mono).”

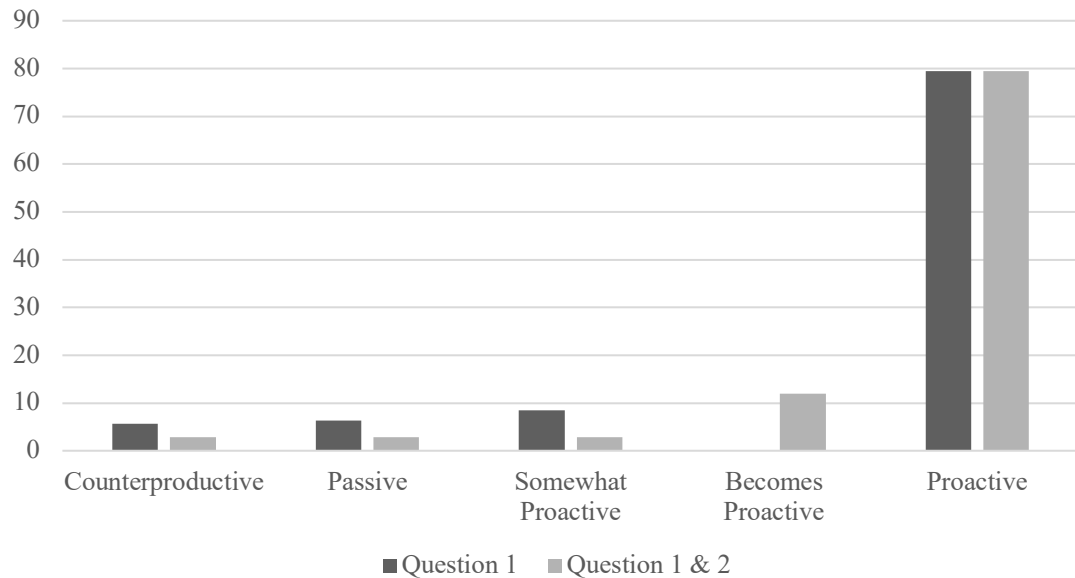
After reading, respondents were asked two questions: (1) “What would you ask the nurse?” and (2) “What else would you ask?” (Martin et al., 2011). A qualitative coding procedure was developed from Martin et al. (2011) to categorize respondents' answers to open-

ended questions. Based on their answer to the first question, respondents were placed into one of four patient activation categories including: proactive, somewhat proactive, passive, and counterproductive (Martin et al., 2011). Respondents were coded as proactive if they asked for clarification of the diagnosis or questions directly related to their symptoms and how they can begin to feel better. Examples of proactive answers were asking what mono is, what the cause of mono is, what medications to take, or what the next steps are to feel better. Answers not directly related to getting better or considered the wellbeing of others were coded as somewhat proactive (e.g., contagiousness, need for quarantine or hospitalization). Respondents were coded as passive if they did not ask anything related to the infection (e.g., note for school/work, proof of diagnosis) or did not answer at all. Lastly, those who asked anything off topic or unrelated to the diagnosis and health were coded as counterproductive. This included answers such as who is responsible, what is a balanced meal, and what are the benefits of mono (See Appendix C for codebook).

In accordance with Martin et al.'s (2011) coding procedure, a fifth category titled "becomes proactive" was also created. This was used to categorize any respondents who were initially coded as somewhat proactive, passive, or counterproductive, but their answer to the second probe included a proactive behavior (Martin et al., 2011). If respondents asked a question that included codes from the original "proactive" category (see examples above) in their second answer they were moved into the "becomes proactive" category.

Most respondents were proactive patients (79.5%,  $n = 140$ ; See Figure 1), followed by somewhat proactive (8.5%,  $n = 15$ ), passive (6.3%,  $n = 11$ ), and counterproductive (5.7%,  $n = 10$ ). Only 21 respondents (11.9%) were moved into the "becomes proactive" category according to their answer to the second question. For statistical analysis, those coded as proactive were

labeled as a high advocacy group (79.5%,  $n = 140$ ) and those from the first question coded as counterproductive, passive, and somewhat proactive were labeled as a low advocacy group (20.5%,  $n = 45$ ).



**Figure 1.** Percentages based on first open-ended question and both questions adding the “becomes proactive” category.

**Medical drama exposure.** Before measuring their exposure, to assess the number of respondents who watch medical dramas, they were asked: “Do you watch medical dramas?” with dichotomous Yes/No answer choices. For clarity, medical dramas were defined as shows that center around fictional healthcare professionals working in a medical environment (Rocchi, 2019).

Then to measure respondent’s exposure to medical dramas, the questionnaire stated: “The following questions are about how much you watched medical dramas during the past three months, combining what you watched on TV, computers, smartphones, and tablets” (Tian & Yoo, 2018, p. 52). The same definition of medical dramas was provided for this section of the questionnaire as well. Respondents were asked how many episodes of *Grey’s Anatomy*, *The*

*Good Doctor, The Resident, and Chicago Med* they had seen in the past three months. These programs were chosen based on their popularity and viewership in the past year (Nielsen, 2020b). As in Tian and Yoo's (2018) study, the answer choices for items regarding medical drama exposure were: none, 1–5 episodes, 6–10 episodes, 11–15 episodes, 16–20 episodes, and 21 or more episodes. Total exposure to medical dramas was measured with an additive index (Tian & Yoo, 2018).

Respondents were also asked if they watched any medical dramas that were not listed. If yes, they were then further instructed to provide the name of the program(s) and how many episodes they had seen in the past three months. The data for this open-ended question was coded to reflect the answers to the closed-ended exposure questions (Tian & Yoo, 2018). The median for this measure was 5.00 and a median split was conducted that resulted in a grouping of non-viewers versus viewers of medical dramas (min = 5, no hours; max = 30, 105 or more hours;  $SD = 2.25$ ). The split resulted in 52.4% of respondents ( $n = 92$ ) reporting no exposure and 47.7% reporting exposure ( $n = 84$ ) to medical dramas in the past three months.

**Perceived realism.** The perceived realism scale is a 9-item measure that uses a 7-point Likert scale ranging from 1= “strongly disagree” to 7= “strongly agree.” Cho et al. (2011) developed this scale to measure medical drama viewers' perception of realism based on a formative study on viewers' evaluation of the reality of media (Hall, 2003). The scale is broken down into three subscales, each with three items measuring a specific dimension of perceived realism. The first dimension, perceived plausibility has items such as “The events on medical dramas could happen in real life.” The second dimension, perceived typicality, has items like “Medical dramas portray events that happen to a lot of people.” The last subscale of the perceived realism scale, perceived narrative consistency, presents items such as “The events in

medical dramas usually have a logical flow.” Cho et al. (2011) used this scale to measure perceived realism for three separate medical drama programs, stating a specific title of a medical drama in each item. For the purpose of this study, to measure general medical drama viewing, the titles of the medical dramas were replaced with “medical dramas.”

Higher scores on this scale indicated an increased perceived realism of medical dramas. For the current study, the perceived realism of medical dramas scale received a Cronbach’s  $\alpha$  of .85. The mean for this scale was 4.31. A mean split was conducted to differentiate those who have an increased perceived realism of medical dramas. Respondents who scored above 4.32 were labeled as having greater perceived realism (45.5%,  $n = 80$ ) and those who scored equal to or below 4.31 were considered to have low perceived realism of medical dramas (54.5%,  $n = 96$ ).

**Preference for information subscale.** The Krantz et al. (1980) Health Opinion Survey, includes two independent subscales for information and behavioral involvement during medical encounters. The information subscale, utilized in this study, measures preferences toward information seeking/asking questions regarding healthcare decisions during in-person medical exams (Krantz et al., 1980). The subscale has seven items, with binary agree/disagree response choices. Following a pilot test to explore how this scale applied to the current study, the scale was adjusted to a 7-point Likert scale to accurately reflect a range of perceptions of a medical drama patient and to improve scale reliability (Cohen,1983). The pilot test is further outlined on p 31.

For the purpose of this study, each item was slightly reworded to reflect the behaviors and actions of the male patient in the stimulus video. Respondents were asked to answer based on how they perceived the patient to act during his in-person medical encounter. Examples of items in the subscale include: “Instead of waiting for them to tell him, he asks the doctor or nurse



immediately after an exam about his health” and “He'd rather be given many choices about what's best for his health than to have the doctor make the decisions for him.” The higher scores represented a higher preference for information seeking and asking questions in healthcare situations. In the current study, the information subscale received a Cronbach's  $\alpha$  of .79.

The mean for this scale, measuring college students' perceptions of the information seeking preferences of the medical drama patient, was 2.50. A mean split was conducted to differentiate those who perceived the medical drama patient to have high or low information seeking behaviors. Respondents who scored 2.51 or above were labeled as perceiving the patient to have higher information seeking behaviors, and those who scored below or equal to 2.50 were labeled as perceiving the patient to have lower information seeking behaviors and those. About half of the respondents (53.84%) perceived the medical drama patient as having low information seeking behaviors ( $n = 94$ ) and 46.6% perceived the patient as having high information seeking behaviors ( $n = 82$ ).

**Frequency of visits to healthcare professionals.** Since information presented in medical dramas has a greater ability to cultivate beliefs and behaviors in those with less health-related experience and knowledge (Busselle, 2001; Quick, 2009), respondents' experience in health situations was measured. To accomplish this, respondents were asked how many times they have visited a healthcare professional in the past three years (Wright et al., 2007). Examples of visits to healthcare professionals were provided (e.g., check-up with a primary care doctor, trip to the ER, or anytime there was an interaction with a healthcare professional such as a doctor or nurse). Two subgroups, those who have lower or higher visits to healthcare professionals were created based on respondent's answers of frequency of visits (Wright et al., 2007).

The median score for this measure was 2.00, and a median split was conducted. Respondents who reported 3 or more visits were labeled as having a high frequency of visits with health care professionals (31.3%,  $n = 55$ ), and those who reported 0 to 2 visits with a health care professional were placed into the low frequency of visits group (68.8%,  $n = 121$ ).

### **Pilot Test**

Before collecting data, two pilot tests were conducted to ensure reliability and help inform qualitative coding. The first pilot test revealed a reliability issue with the subscale for the perceived information seeking preference of patient in stimulus video ( $\alpha = .434$ ). To improve reliability, the subscale was converted from a dichotomous agree/disagree format to a 7-point Likert scale (Cohen, 1983), which is outlined later in this section. The second pilot test was conducted with a different set of students ( $\alpha = .502$ ). After close examination, two positively-worded items were identified as outliers in the data and utilized as a second manipulation check to ensure accurate reading of the questions. Once those responses were discarded, the scale became reliable with a Cronbach's  $\alpha$  of .820 and the study proceeded to data collection.

### **Analysis**

SPSS was used to analyze all data. Once the open-ended questions were given qualitative codes, placing them into one of the five patient activation categories, they were put into SPSS with the respective numerical codes for each category (See Appendix C for codebook). Research questions 1 and 2 were each analyzed with an independent samples t-test. They questioned the affect that patient advocacy rating (RQ1) and frequency of visits with healthcare professionals (RQ2) had on college students' perception of the information seeking preferences of the medical drama patient. Hypotheses 1 and 2 were also tested with an independent samples t-test. The first hypothesis predicted that viewers of medical dramas would rate the perceived information

seeking preferences of the medical drama patient lower than non-viewers of medical dramas. In addition, hypothesis 2 suggested that perceived realism would predict negative perceptions of the information seeking preferences of the medical drama patient.

## Chapter Four: Results

Research question 1 asked the affect that patient advocacy rating had on college students' perception of the information seeking preferences of the medical drama patient. An independent-samples t-test was conducted to compare perceptions of the information seeking preferences of the medical drama patient in high and low patient advocacy conditions. There was not a significant difference in the scores for high patient advocacy rating ( $M = 2.47, SD = 0.78$ ) and low patient advocacy rating ( $M = 2.57, SD = 0.67$ ) conditions;  $t(174) = 0.57, p = 0.57$ .

Research question 2 asked the affect that frequency of visits with a healthcare professional had on college students' perception of the information seeking preferences of the medical drama patient. An independent-samples t-test was conducted to compare perceptions of the information seeking preferences of the medical drama patient in high and low frequency of visits with healthcare professionals. There was not a significant difference in the scores for high frequency of visits to a healthcare professional ( $M = 2.36, SD = 0.31$ ) and low frequency of visits to a healthcare professional ( $M = 2.57, SD = 0.72$ ) conditions;  $t(174) = 1.74, p = 0.08$ .

Hypothesis 1 predicted that viewers of medical dramas would rate the perceived information seeking preferences of the medical drama patient lower than non-viewers of medical dramas. An independent-samples t-test was conducted to compare perceptions of the information seeking preferences of the medical drama patient in exposure and no exposure to medical dramas conditions. There was not a significant difference in the scores for medical drama exposure ( $M = 2.49, SD = 0.74$ ) and no medical drama exposure ( $M = 2.51, SD = 0.78$ ) conditions;  $t(174) = 0.28, p = 0.78$ . Hypothesis 1 was not supported.

Hypothesis 2 suggested that perceived realism would predict negative perceptions of the information seeking preferences of the medical drama patient. An independent-samples t-test was conducted to compare perceptions of the information seeking preferences of the medical drama patient in high and low perceived realism of medical dramas conditions. There was not a significant difference in the scores for high perceived realism ( $M = 2.41$ ,  $SD = 0.74$ ) and low perceived realism ( $M = 2.58$ ,  $SD = 0.77$ ) conditions;  $t(174) = 1.54$ ,  $p = 0.13$ . Hypothesis 2 was not supported.

**Table 1.** Results of independent sample t-tests for research questions and hypotheses

	Low		High		t(174)	p
	M	SD	M	SD		
Patient advocacy rating	2.57	.67	2.47	.78	.57	.57
Frequency healthcare visits	2.57	.72	2.36	.31	1.74	.08
Medical drama exposure	2.52	.78	2.49	.74	.28	.78
Perceived realism	2.58	.77	2.41	.74	1.54	.13

Note: For medical drama exposure “low” is equivalent to zero hours of exposure in the past three months.

**Table 2.** Mean, Standard Deviation, and Reliability for Independent Variable

Item	N	M	SD	$\alpha/r$
<b>Preference for Health Information (composite)</b>	176	2.50	.760	.79
He doesn't ask the doctor or nurse many questions about what they're doing during a medical exam. <sup>R</sup>	176	2.16	1.030	
He'd rather have doctors and nurses make the decisions about what's best than for them to give him a whole lot of choices. <sup>R</sup>	176	2.43	1.093	
Instead of waiting for them to tell him, he asks the doctor or nurse immediately after an exam about his health.	176	2.86	1.328	
He asks the doctor or nurse lots of questions about the procedures during a medical exam.	176	2.16	.984	
He believes it is better to trust the doctor or nurse in charge of a medical procedure than to question what they are doing. <sup>R</sup>	176	2.47	.967	
He waits for the doctor or nurse to tell him the results of a medical exam rather than asking them immediately. <sup>R</sup>	176	2.50	1.101	
He'd rather be given many choices about what's best for his health than to have the doctor make the decisions for him.	176	2.95	1.411	
<b>Perceived Realism of Medical Dramas (composite)</b>	176	4.31	.919	.85
Stories similar to those in medical dramas happen in many people's lives	176	4.41	1.415	
Stories in episodes of medical dramas are coherent.	176	4.35	1.283	
The events in medical dramas could happen in real life.	176	5.21	1.109	
The storylines in medical dramas always make sense.	176	3.32	1.467	
The events in medical dramas portray possible real-life situations.	176	4.83	1.178	
The events in medical dramas usually have a logical flow.	176	4.27	1.471	
Medical dramas portray events that happen to a lot of people.	176	3.61	1.519	
Stories in medical dramas could possibly happen in real life.	176	5.20	1.131	
The events in medical dramas are something that many people experience.	176	3.62	1.541	

R = Reversed item.

## Chapter Five: Discussion

To gain a greater understanding of perceptions of patient self-advocacy skills in medical dramas, this study explored the influence that different variables have on college students' perception of the information seeking preferences of a medical drama patient. More specifically, the study compared four different variables (patient advocacy rating, frequency of visits with a healthcare professional, perceived realism of medical dramas, medical drama exposure) to the perceived information seeking preferences of a medical drama patient. Due to the lack of research regarding medical dramas and perceptions of patient self-advocacy, the study used a preexisting scale meant to measure personal health information seeking behaviors during medical encounters (Krantz et al., 1980) and adapted it to measure how someone perceives the information seeking preferences *of a patient* in a medical drama.

Both research questions attempted to offer insight into how personal characteristics and experiences might influence perceptions of information seeking behaviors of a medical drama patient. Research shows that having increased assertiveness, or asking questions during a medical encounter, plays an important role in one being a successful patient self-advocate (Brashers et al., 1999; Brashers et al., 2017; Bylund et al., 2010; Salazar, 2018; Senders et al., 2016). In accordance with those findings, this study considered the affect one's own information seeking preferences regarding a hypothetical medical encounter would have on their perceptions of the information seeking preferences of a medical drama patient in a similar medical encounter.

This study found that one's own level of patient self-advocacy did not have a significant influence on how they perceived the information seeking behaviors of the medical drama patient.

Regardless of patient advocacy rating, respondents collectively perceived the medical drama patient as having a rather low preference for information seeking behaviors during the medical encounter. In other words, respondents found the medical drama patient to not ask many questions, voice his opinions, or offer suggestions to the physician in the stimulus video. This may be attributed to the fact that the health information seeking behaviors of the medical drama patient do not align with the ones recommended by health literature. More specifically, research shows that patients must listen actively, ask questions, and offer their own opinions and suggestions during medical encounters in order to have an increased level of assertiveness that is needed to self-advocate (Brashers et al., 1999; Cegala et al., 1996; Roberts & Aruguete, 2000; Roter & Frankel, 1992; Wanzer et al., 2004; Wiltshire et al., 2006).

As healthcare experience and knowledge can have a significant influence on cultivation effects (Quick, 2009), the study also considered college students' frequency of visits with a healthcare professional and how that may affect their perceptions of the information seeking preferences of the medical drama patient. As the results show for research question 2, comparing frequency of visits with a healthcare professional (i.e., healthcare experience) to the perceived information seeking preferences of the medical drama patient was nearly significant. Those who reported higher frequency of visits with a healthcare professional were more likely to perceive the patient as having less preference for health information. This could suggest that the less personal experience one had with medical encounters, and possibly healthcare knowledge, the less likely they were to pick up on the lack of assertiveness of the medical drama patient. This finding aligns with past studies that found those with little healthcare knowledge and experience heavily rely on medical dramas for health information (Chung, 2014; Quick 2009), not taking into consideration the inaccuracy of information provided in these programs.



Each hypothesis examined a variable (medical drama exposure and perceived realism of medical dramas) that has an influence on the cultivation of health beliefs and behaviors from medical dramas (Cho et al., 2011; Tian & Yoo, 2018). Past research shows the tendency for medical dramas to inaccurately portray many health topics such as the prevalence of disease, hospital survival rates, preventative health measures, and medical mistakes (Cho et al., 2011; Chung, 2014; Foss, 2011; Hetsroni, 2009). This is also the case when it comes to patient self-advocacy, where medical dramas frequently portray patients as having excellent self-advocacy skills (Hirt et al., 2012; Maple, 2018; Riegle & Bernabe, 2019), when in reality most patients do not self-advocate (Brashers et al., 1999; Hagan & Medberry, 2015; Wiltshire et al., 2006) as it is a learned skill that takes practice (Hermansen-Kobulnicky, 2008).

According to cultivation theory, viewers of medical dramas would believe that patients in the real-world act as idealistic self-advocates. However, since the patient in the medical drama stimulus did not show excellent self-advocacy skills, it was hypothesized that those who watch medical dramas would perceive the medical drama patient to have lower information seeking preferences than those who do not watch medical dramas. Regardless of medical drama exposure, there was not a significant relationship between these two variables as respondents generally perceived the patient to have low information seeking preferences, as he did not ask his physician and nurse many questions in the stimulus. While this is divergent for medical dramas, as most portray patients as having exceptional self-advocacy skills, the findings suggest that exposure to medical dramas might not align with perceptions of a medical drama scene that may be too realistic causing viewers to see through it.

Previous literature shows that those who watch more medical dramas have greater perceived realism, believing that medical dramas are an accurate reflection of the real world

(Busselle, 2001; Cho et al., 2011). In terms of patient self-advocacy, medical dramas often portray patients as having all the skills and confidence needed to self-advocate (Hirt et al., 2012; Maple, 2018; Riegle & Bernabe, 2019). As mentioned above, this is not consistent with how patients are known to act during hospital visits (Hagan & Medberry, 2015). Hypothesis 2 attempted to expand this notion by predicting that those with greater perceived realism of medical dramas would negatively perceive the information seeking preferences of the medical drama patient. More specifically, those who believe that the real world is consistent with what is shown in medical dramas would be more likely to view the medical drama patient as having low information seeking skills.

The results of this hypothesis approached significance, suggesting that a greater perceived realism of medical dramas may be an important influence on the perceptions of portrayals of patients in medical dramas. More specifically, the results suggest that those who believe medical dramas, which commonly portray patients as skilled self-advocates (Riegle & Bernabe, 2019), to be a representation of the world accurately perceived the patient, who showed little self-advocacy skills, as having a low preference for health information during the medical encounter. Therefore, there is a relationship between perceived realism of medical dramas and perceptions of scenes that are not an accurate representation of patient self-advocacy. To be a successful patient self-advocate research shows that a patient must have an increased level of assertiveness and proactively seek health information during medical encounters (Brashers et al., 1999). However, the stimulus video showed the patient not acting as a self-advocate, inquiring more information about his health; thus, those who had a greater perceived realism of medical dramas identified the patient as not having an increased level of assertiveness during the medical encounter in the stimulus video.

The results of research question 2 and hypotheses 2 both align with findings that show the influence that experience with healthcare and perceived realism of medical dramas have on the cultivation of health beliefs and behaviors (Cho et al., 2011; Quick, 2009). Moreover, greater perceived realism of medical dramas and experience with healthcare may serve as a predictor in determining the influences of perceptions of medical drama patients and self-advocacy. While the findings were not statistically significant, they help to inform the importance of understanding influences on perceptions of patients in medical dramas. Additionally, the results show that measuring perceptions of a patient in a medical drama may not be possible with the current scale and that further research is needed to develop an accurate measure of how someone perceives the patient self-advocacy skills of a TV character.

Medical drama realism and exposure offer a unique overlap to examine perception of medical patients. However, the findings of this study indicate that adapting a scale that measures personal health information seeking preferences (Krantz et al., 1980) of real patients may not be the proper way to measure perceptions of a medical drama patients' health information seeking preferences. This may be attributed to difficulty in judging a TV characters' behaviors without having additional information on their past health behaviors and/or a historical context on their health beliefs. The video was a short look into one medical drama patients' experience during a medical encounter. In the emergency of the medical drama patients' health situation, time was limited for extra information or details on his personal health preferences. Thus, the respondents were able to form perceptions only from the four-minute video that showed the patient not asking many questions or acting assertively. As patients in medical dramas usually speak up for themselves, ask questions, and offer up suggestions to their physicians (Hirt et al., 2012; Riegle & Bernabe, 2019), the patient in the stimulus video was not assertive and that might have thrown

off those who are familiar with the common portrayal of medical drama patients as having flawless self-advocacy skills.

While the adaptation of the scale did not work for this particular study, it provided an opportunity to explore what may need to be improved in order to successfully measure perceptions of a medical drama patient's health preferences. Different factors may strengthen the results in attempting to measure these perceptions. A better understanding of the health beliefs, behaviors, and past health experience of those who are being asked to rate the medical drama patient may be helpful in analyzing their perceptions. This coincides with the need for more precision to measure the respondents' perceptions of their own patient self-advocacy skills. The current study used an open-ended question regarding a hypothetical scenario related to the one shown in the stimulus. However, it may have been more effective to measure personal health information seeking behaviors and perceptions of medical drama patients' health information seeking behaviors in similar way. Overall, having a deeper understanding of respondents' health behaviors in a way that is more comparable to their perceptions of the health behaviors of the medical drama patient may result in more significant findings on the influences of perceptions of patients in medical dramas.

Lastly, the scale used to measure perceived information seeking behaviors may benefit from modified language of the items to refer to patients in general instead of one specific patient. When measuring medical drama viewers' perceptions of physician courageousness, Quick (2009) had success in wording items to measure general, not specific perceptions. For example, items were phrased as "In general, physicians are brave" or "In general, physicians are clever" (Quick, 2009, p. 47). While this scale did not measure perceptions of the physicians own preferences or beliefs, it did measure perceptions of their behaviors. Therefore, it may provide

insight into how a more general phrasing of items asking for perceptions of patients in medical dramas may provide accurate results and be easier for respondents to answer without knowing specific details of the characters' health background.

### **Theoretical implications**

While past studies have explored various health topics and portrayals in medical dramas through the lens of cultivation (Cho et al., 2011; Chung, 2014; Foss, 2011; Hetsroni, 2009; Quick, 2009; Tian & Yoo, 2018), there is little to no research that considers how medical dramas may cultivate perceptions of patient self-advocacy skills, including health information seeking behaviors. Therefore, this study attempted to fill a gap in cultivation literature by adding a self-advocacy element (increased assertiveness) during medical encounters to the variety of health topics that exposure to medical dramas may influence. While this study did not produce statistically significant results, it helps to support the main hypothesis of cultivation theory that those who watch an extreme amount of TV, or are exposed to a genre that spreads similar messages, will perceive the real world to be as it is shown on TV (Gerbner, 1969).

The findings from this study advance current cultivation research by applying two variables, both known to have an influence on cultivation effects of medical dramas, to the novel topic of perceptions of portrayals of patient self-advocacy skills in medical dramas. More specifically, those who visited a healthcare professional less frequently scored the medical drama patient higher for asking questions and preferring health information. Those with a higher frequency of visits with a healthcare professional possibly had a better understanding of the amount of assertiveness that is needed to self-advocate during a medical encounter. This ties into the findings of past studies that suggest medical dramas have stronger cultivation effects in viewers with less healthcare experience (Hoffman et al., 2017; Quick, 2009). Moreover, this

study informs cultivation research by suggesting that experience with healthcare may be a predictor to perceptions of the health information seeking preferences of a medical drama patient. Thus, further examination could assess if perception of medical drama patients is influenced by factors such as less experience with healthcare, fewer medical encounters, and possibly less health-related knowledge.

In addition, past research suggests that exposure to medical dramas leads to a greater perceived realism of medical dramas, which in turn leaves viewers with beliefs representing the information presented in medical dramas whether it is accurate or not (Cho et al., 2011). This study's findings hint that a greater perceived realism of medical dramas, resulting from exposure to medical dramas, may also be a predictor for how viewers perceive the information seeking preferences of a medical drama patient. Those who had a greater perceived realism of medical dramas were less likely to perceive the medial drama patient as having a high preference for health information. As medical dramas commonly portray patients as having high information seeking preferences, this finding corresponds with past research suggesting those with a greater perceived realism of medical dramas are influenced by the information presented in them. This finding supports past research that also finds level of perceived realism to be an important factor in the cultivation of health beliefs and behaviors from medical dramas (Cho et al., 2011; Tian & Hoo, 2018; Quick, 2009).

### **Limitations and future suggestions**

Limitations exists due to the exploratory nature of this study. First, with a purposeful sample of college students the results are not generalizable to larger populations. Additionally, there was attrition that reduced the useable sample size. However, it should be noted that the attention check questions were helpful to ensure clean data. A larger and wider range of

respondents from a random sample would have led to possibly more significant and generalizable results. Another limitation was that the study measured perceptions based off one scene from one medical drama. While this scene was selected because of its relevance to college students, dozens of medical dramas and hundreds of scenes could have been considered.

The altered scale was limited in its ability to measure perceptions of the information seeking preferences of the medical drama patient. The original scale was designed to measure “routine aspects of medical care and do[es] not refer to severe or traumatic illness” (Krantz et al., 1980, p. 980). Even with the adjustments made to the scale, the dramatic nature of medical dramas and the urgency of the health situation of the patient in the stimulus video might not have been applicable to the scale’s design.

While medical drama exposure was controlled for in this study, an additional limitation is that respondents were only exposed to the stimulus once. As the theory suggests, those who have extreme exposure to TV, over long periods of time, are more likely to be cultivated (Gerbner, 1969). Due to the fact that this was not a longitudinal study, exposing respondents to medical dramas over a longer period of time, perceptions were only based off one viewing. Therefore, the findings cannot suggest genuine cultivation effects and may have led to insignificant results.

A lack of research regarding mass media and health persists (Foss, 2011), especially considering portrayals and perceptions of patient self-advocacy in entertainment media. Therefore, future research should consider exploring topics of patient self-advocacy and how it is presented on TV. While medical dramas are the most common programs to feature patients, they are not the only ones. Future research could consider other types of programs and other populations to examine the cultivation of health perceptions and beliefs regarding patient self-advocacy. In addition, future research would benefit from manipulating the stimuli to analyze the

effects that different scenes with other characters and health issues have on viewers' perceptions. Lastly, future research should attempt to develop a scale that can be applied to viewers' perceptions of the behaviors and preferences of a character on TV. While a specific scale for perceptions of information seeking preferences would be useful, a scale should first be developed that is able to measure perceptions of character's health beliefs and behaviors.

## **Conclusion**

Managing one's own health in the complex world of healthcare can be difficult. It takes time and energy and can often be met with unexpected outcomes and disappointment; and college students are just beginning to navigate their own way through the healthcare system (Sharkey et al., 2017). It is vital that they are prepared to be successful patients, whether chronically ill or not. It is important to understand the way viewers perceive the health topics and portrayals of patients in medical dramas. Since medical dramas provide inaccurate health information and portrayals of physicians and patients (Foss, 2011; Hetsroni, 2009), it is even more important to understand how these perceptions may influence viewers' own health beliefs and behaviors. This exploratory study sought to merge two very important topics of patient self-advocacy and cultivation of health beliefs from medical dramas and attempted to fill a gap in literature surrounding perceptions of patient self-advocacy in medical dramas.

Focusing on increased assertiveness during medical encounters, a vital skill of patient self-advocacy, this study identified a need for a scale that is able to accurately measure how one perceives the behaviors and preferences of a medical drama patient. More specifically, the perceptions of patient self-advocacy portrayals in medical dramas are important as patient self-advocacy skills must be learned and practiced to be successful (Hermansen-Kobulnicky, 2008; Walsh-Burke & Marcusen, 1999). However, these skills are often misrepresented in medical



dramas, so it is essential that viewers not be cultivated to believe that patient self-advocacy skills come naturally as portrayed in medical dramas (Hirt et al., 2012; Maple, 2018; Riegle & Bernabe, 2019). In addition, understanding the specific influences that affect how viewers of medical dramas perceive patient self-advocacy is important to then examine if those perceptions have an impact on viewers own self-advocacy skills during medical encounters. With the influx of streaming services, new TV programs, and popularity of binge watching all rising simultaneously, the spread of health information on television must be closely monitored as those who are susceptible to cultivation effects may be in danger of developing perceptions that influence their health beliefs and ultimately behaviors.

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## Appendix A: IRB Approval Document



### EXEMPT DETERMINATION

November 23, 2020

Alyssa Harrell  
6002 Printery St. Unit 105  
Tampa, FL 33616

Dear Alyssa Harrell:

On 11/22/2020, the IRB reviewed and approved the following protocol:

Application Type:	Initial Study
IRB ID:	STUDY001754
Review Type:	Exempt 2
Title:	Cultivating courage: Medical dramas and portrayals of patient self-advocacy
Funding:	None
Protocol:	• Cultivating Courage Protocol Fixed.docx;

The IRB determined that this protocol meets the criteria for exemption from IRB review.

In conducting this protocol, you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Please note, as per USF policy, once the exempt determination is made, the application is closed in BullsIRB. This does not limit your ability to conduct the research. Any proposed or anticipated change to the study design that was previously declared exempt from IRB oversight must be submitted to the IRB as a new study prior to initiation of the change. However, administrative changes, including changes in research personnel, do not warrant a modification or new application.

Ongoing IRB review and approval by this organization is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these activities impact the exempt determination, please submit a new request to the IRB for a determination.

Sincerely,

Gina Larsen

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**Institutional Review Boards / Research Integrity & Compliance**

FWA No. 00001669

University of South Florida / 3702 Spectrum Blvd., Suite 165 / Tampa, FL 33612 / 813-974-5638

Page 1 of 2

## Appendix B: Questionnaire

1. How many times have you visited a healthcare professional in-person in the **past 3 years?**

For example, an in-person visit to a healthcare professional could be a check-up with a primary care doctor, trip to the ER, or anytime you interacted with a healthcare professional such as a doctor or nurse.

- No visits
- 1-3 visits
- 4-6 visits
- 7-10 visits
- More than 10 visits

You and your friend have been studying all week for an important final exam. You've been eating junk food and not getting much sleep. You both start to feel like you're coming down with something. You feel tired, feverish and have a sore throat. To make sure it's nothing too serious before your final exam, you both go to the health center to get checked out in-person. After being seen by a nurse, you wait before returning to an exam room. The nurse says that the good news is you both can ask for an extension on your final exam; but the bad news is you both have mononucleosis.

2. What would you ask the nurse?
3. What else would you ask?
4. Do you watch medical dramas?

*A medical drama is any show that centers around fictional healthcare professionals working in a medical environment.*

- Yes
- No

*Please respond to each statement by selecting the phrase that best describes how you think of medical dramas.*

5. Stories similar to those in medical dramas happen in many people's lives.
6. Stories in episodes of medical dramas are coherent.
7. The events in medical dramas could happen in real life.
8. The storylines in medical dramas always make sense.
9. The events in medical dramas portray possible real-life situations.

10. The events in medical dramas usually have a logical flow.
11. Medical dramas portray events that happen to a lot of people.
12. Stories in medical dramas could possibly happen in real life.
13. The events in medical dramas are something that many people experience.

### Stimulus Video

14. What major is the male patient studying in college?
  - Math
  - English
  - Communications
  - Engineering
15. (Only presented if previous question is answered incorrectly) What is the relationship between the male patient and the female who is with him at the hospital?
  - Mother
  - Friend
  - Wife

*Please respond to each statement by selecting the phrase that best describes **the male patient in the video** you just watched.*

16. He doesn't ask the doctor or nurse many questions about what they're doing during a medical exam.
17. He'd rather have doctors and nurses make the decisions about what's best than for them to give him a whole lot of choices.
18. Instead of waiting for them to tell him, he asks the doctor or nurse immediately after an exam about his health.
19. He asks the doctor or nurse lots of questions about the procedures during a medical exam.
20. He believes it is better to trust the doctor or nurse in charge of a medical procedure than to question what they are doing.
21. He waits for the doctor or nurse to tell him the results of a medical exam rather than asking them immediately.
22. He'd rather be given many choices about what's best for his health than to have the doctor make the decisions for him.

*The following questions are about how much you watched medical dramas during the **past 3 months**, combining what you watched on TV, computers, smartphones, and tablets.*

*A medical drama is any show that centers around fictional healthcare professionals working in a medical environment.*

23. How many episodes of Grey's Anatomy have you watched in the **past 3 months**?
  - None
  - 1-5 episodes
  - 6-10 episodes
  - 11-15 episodes

- 16-20 episodes
  - 21 or more episodes
24. How many episodes of *The Good Doctor* have you watched in the **past 3 months**?
- None
  - 1-5 episodes
  - 6-10 episodes
  - 11-15 episodes
  - 16-20 episodes
  - 21 or more episodes
25. How many episodes of *The Resident* have you watched in the **past 3 months**?
- None
  - 1-5 episodes
  - 6-10 episodes
  - 11-15 episodes
  - 16-20 episodes
  - 21 or more episodes
26. How many episodes of *Chicago Med* have you watched in the **past 3 months**?
- None
  - 1-5 episodes
  - 6-10 episodes
  - 11-15 episodes
  - 16-20 episodes
  - 21 or more episodes
27. Besides the ones listed above, are there any other medical dramas that you watch? If yes, what is the name(s) and how many episodes have you watched in the **past 3 months**?
- Yes \_\_\_\_\_
    - 1-5 episodes
    - 6-10 episodes
    - 11-15 episodes
    - 16-20 episodes
    - 21 or more episodes
  - No
28. What is your age?
- \_\_\_\_\_
29. What gender do you identify as?
- Female
  - Male
  - Other \_\_\_\_\_
  - Prefer not to answer



## Appendix C: Open-ended Question Coding Categories

**Proactive (5):** If participants asked questions directly related to getting rid of the infection, treating symptoms or asking for more information to clarify the diagnosis.

- What medication to take/ What is the treatment/how do I get the meds or treatment
- Is there a cure
- Asking how to get better/ How can I fight it/what do I need to do
- Follow up appt. to see if it is getting better or worse
- Asking what mono is
- How can I prevent it from getting worse/ How can I lessen/ease symptoms
- How do I care for myself at home
- What the cause of mono is/ How did I get it
- Long and short term effects of mono/is this something that will be a long term problem
- What precautions to take to not get it again
- Contact while I am sick/who to reach out to with questions
- Are there side effects from the medication
- How does this effect my body
- Seriousness of diagnosis
- What should I do to not get it again/is it possible to get again/had it before how did I get it again
- How long mono lasts/ How long until I get better/recovery time

**Somewhat Proactive (3):** If participants asked questions regarding people other than themselves or less direct questions about the infection, that were not about how to get better or stop the infection from worsening.

- How to protect others
  - “When is it safe for me to be around people without potentially giving Mono to others?”
  - “Is it safe to go to work?”
  - “How to prevent spreading it”
  - “Should I be concerned for those I’ve been in contact with?”
- What are the ways of spreading it
- Am I contagious/how long I am contagious for
- Do I need to be hospitalized
- Will I survive/Am I going to die (with no specifics)
- Why is this happening
- Do I need to stay home
- How much sleep I should get

**Passive (2):** If participants asked questions that were not related to their wellness/health.

- Asks for a note for work or school
- How do I get a doctor's note
- Medical document with proof of diagnosis
- How much treatment costs/how expensive it will be
- Not asking anything

**Counterproductive (1):** If participants asked off-topic, unclear or inapplicable questions.

- Who is responsible
- "Take my temperature"
- "What is wrong with me/anything I need help with/everything right with me"
- Asks about an unrelated illness/diagnosis
- What are the benefits
- How long until I take the exam
- How much is a balanced meal
- "Kissing disease"
- "N/A"

**Becomes proactive (4):** These codes are the same as the ones listed in the "proactive" category.