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Chronic pain in entertainment media: using empathy to reduce stigma

Rebecca Lang
Louisiana State University and Agricultural and Mechanical College

CHRONIC PAIN IN ENTERTAINMENT MEDIA: USING EMPATHY TO REDUCE STIGMA

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Rebecca E. Lang
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ABSTRACT

Entertainment media represent a primary source of health information, making it a prime area of research for wide-spread health issues such as chronic pain. Chronic pain conditions can elicit stigmatization due to pain representing a subjective experience; coming to understand the experience of a person in pain can reduce stigma for that person as well as the entire group of people with chronic pain. Entertainment media, through the use of an engaging narrative and characters, can portray an illness experience that potentially elicits empathy and reduces stigma for chronic pain conditions. This study is among the few to employ empathy and stigma measures for chronic pain. In a mixed experimental design, participants watched either a healthy or chronic pain media depiction from the television series *House, M.D.* and subsequently read an article about Smith, a stigmatized depiction of a man who experiences chronic pain after a vehicular accident. Empathy was divided into affective and cognitive components, and measured at baseline, post-video, and post article. Stigma was divided into nine stereotypes and measured post-video and post-article. Results from a repeated measures ANOVA found that House was highly stigmatized and Smith moderately stigmatized. Additionally, empathy diminished for both healthy and pain depictions with no statistical difference. However, significant gender differences were found between baseline, post-video, and post-article scores for both empathy and stigma. Females experienced greater changes in empathy and stigma than males, expressing both higher baseline scores and lower post-video scores. Implications for cultivation theory are explored.

CHAPTER 1. INTRODUCTION

Research points to entertainment media as one of the primary sources of health information today (Gray, 2007). This research specifically focused on entertainment media depictions of chronic pain. After a review of literature, this study selected the psychology constructs of empathy and stigmatization in order to explore perceptions of chronic pain depictions in entertainment media. In doing so, this study hopes to achieve a multi-disciplinary approach – bridging medical, mass communication, and psychology disciplines – which mimics the current trend in chronic pain literature. While this study explores chronic pain from a mass media perspective, the primary goal was to cover gaps in knowledge in chronic pain research related to the role of mass media in shaping perceptions of people depicting chronic pain conditions.

Chronic pain should not be confused with other types of pain. A comprehensive definition of chronic pain, outlined in Flor and Turk (2011), can be summarized as, "pain which usually originates from an injury, persists beyond a reasonable period of time for the injury to heal, and is unlikely to be cured even after extensive treatment by a doctor.".

In the area of chronic pain, research has been limited to exploring the impact of entertainment media narratives involving characters that develop or currently have cancer (Gray, 2007). Entertainment media's role in educating or discussing cancer contributes valuable research for the area of chronic pain, but other forms of chronic pain have received very little attention in the area of entertainment media. Moreover, research identifies a need for more studies that explore the relationship between chronic pain conditions and entertainment media, with a specific focus on attitudes and perceptions (Lumley et al., 2011).

In a concentrated review of chronic pain research, Flor and Turk (2011) organized a growing body of research on the topic of chronic pain. Research on chronic pain in a variety of areas came about along with a growing public awareness of chronic pain conditions. Specialized centers which focus on chronic pain emerged in the 1960s and currently number in the thousands; furthermore, the International Association for the Study of Pain formed in 1975 and published the first journal devoted exclusively to pain research, simply titled, *Pain* (Flor & Turk, p. 9). In essence, chronic pain continues to inspire an exponentially growing body of research.

Studying attitudes regarding chronic pain suggests the involvement of psychology. However, the earliest studies of pain utilized a unidimensional model of pain, which supported the view that all pain originated from a physiological source, and involved a "direct transmission of pain from the periphery, to the spine and then the brain" (Flor & Turk, p. 6). In this time, when pain persisted without any physiological evidence, one assumed that pain is manifested from personality traits or psychopathology. In the 1960s and 1970s, multidimensional models emerged which emphasized external factors. The study of pain behaviors, or "observable expressions of pain and suffering," emerged as a significant focus during this time and led to the inclusion of psychologists in the research on chronic pain (Flor & Turk, p. 8). Lumley et al. (2011) also identified these behaviors as "maladaptive," leading to potential social problems requiring further attention from therapy psychologists (p. 943).

A growing body of research focuses on the construct of empathy as it relates to chronic pain (Lumley et al., 2011; Sambo, Howard, Kopelman, Williams, & Fotopoulou, 2010). Lumley et al. (2011) recommends exercising caution when determining definitions and operationalizations of empathy. Reniers, Corcoran, Drake, Shryane, and Völm (2011) addressed the variability in the definitions of empathy through an extant review of literature. As a result,

this study utilized their definition of empathy as resulting in "a comprehension of other people's experience as well as the ability to vicariously experience the emotional experience of others" (p. 85). While some literature exists on the relationship between chronic pain and empathy, research lacks literature connecting these concepts with entertainment media.

In chronic pain research, empathy shares a unique relationship with stigmatization (Lumley et al., 2011). Stigmatization represents a process of labeling individuals or groups due to a characteristic which potentially differentiates them from other people (Cohen, Quintner, Buchanan, Nielsen, & Guy, 2011). Stigmatization results in, and is perpetuated by, stereotyping and subsequent discriminatory behaviors. This study explored the interaction between entertainment media depictions of chronic pain and stigmatization through several common stereotypes (Decety, Echols, & Correll, 2009).

The primary objective of this study was to add to the current literature exploring chronic pain using a multidisciplinary approach. Specifically, this study explored the impact of entertainment media on perceptions regarding chronic pain by utilizing the concepts of empathy and stigmatization. First, this study explored whether individuals empathize toward a depiction of a chronic pain condition and second, whether media depictions of chronic pain acted as a buffer against stigmatized depictions. A discussion follows on a broader literature review connecting chronic pain, empathy, and stigma from the perspective of entertainment media.

CHAPTER 2. LITERATURE REVIEW

2.1 Health and Entertainment Media

In a broad sense, health campaigns utilize television to provide information in order to prevent or manage health issues. Entertainment television, specifically, holds the potential to engage a large audience over time, in an incidental manner, allowing for repetition of core themes (Hether, Huang, Beck, Murphy, & Valente, 2008; Wakefield, Loken, Hornik, 2010); moreover, entertainment television is increasingly cited as a source of health information (Brodie et al., 2001). Television depictions of risky or anti-social behaviors (e.g. alcoholism, rape) as well as socially uncomfortable topics (e.g. discussing sex) results in an effort to understand how television shapes attitudes and behaviors in its audience.

Mass media represent a primary method for educating the public about health issues, and entertainment television plays a role in these efforts due to its unique format (Langlieb, Cooper, & Gielen, 1999; Strauman & Goodier, 2011). Entertainment television, such as a prime-time show (crime drama, medical drama, sitcom, etc), transmits positive health messages by utilizing interesting characters and engaging narratives (Hether et al., 2008). Previous work in the area of health communication explored the impact of entertainment television of a number of genres – medical drama, crime drama, sitcoms, for film and shows – on the attitudes of participants concerning topics such as sexual violence, health knowledge, obesity, etc. (Wakefield et al., 2010). This study proposes that chronic pain, a condition which alters daily life, might benefit from entertainment television depictions in order to facilitate a more accurate understanding of the variety of difficulties these individuals face through the use of interesting characters and an engaging narrative. A narrative which involves a media depiction of chronic pain can be thought of as an illness experience narrative.

2.2 The Illness Experience

To further how entertainment television benefits the public understanding of chronic pain, this study reviewed literature on the illness experience. Research differentiates between the concept of *disease* – the physical characteristics of a condition – and *illness* – the unique psychological as well as physiological experience of living with a condition (Gray, 2007; Flor & Turk, 2010). Gray (2007) explored the illness experience of cancer in *Sex and the City*. The researcher asserted that *Sex and the City*, the television show, offered a narrative for the public to watch the illness experience, as well as evaluate the environmental, social, and psychological factors that contribute to the experience.

The illness experience can be thought of as an integral aspect of an engaging narrative and can be understood through the main characters. Research indicates that the success of health messages via entertainment television can be largely attributed to connecting to the characters within a compelling narrative (Moyer-Guse, Chung, & Jain, 2011). In a study, participants who viewed a discussion on sex health in the movie *Sex and the City* were more than twice as likely to engage in real life discussion of sex health in the following two weeks than those who did not view a media depiction of sex health discussion (Moyer-Guse et al., 2011). A compelling illness experience narrative can empower an audience to engage in more health-seeking behaviors (e.g. learn about the signs of cancer) for both healthy and unhealthy individuals (Gray, 2007).

The illness experience as a narrative might experience success due to its ability to address what Hust et al. (2010) describes as an "uncomfortable issue." While little is known about the impact of entertainment media on attitudes regarding chronic pain conditions, research shows that, in real life, negative perceptions potentially cause severe obstacles for improving quality of life for these individuals (Decety et al., 2009). Television provides an example that individuals

tend to borrow when discussing, or otherwise interacting with, an uncomfortable issue (Hust et al., 2010). An engaging illness experience narrative, portrayed by interesting or central characters, might encourage an audience to empathize with chronic pain as well as act as a script they rely on in real life situations.

Determining more specific content required in entertainment media to encourage empathy presents a challenge to this study. In research on entertainment media, it is not easy to list specific items that lend to an engaging narrative or an interesting character. Likewise, research does not indicate specific guidelines for how media portrays the illness experience when trying to positively influence perceptions. However, research supports the idea that individuals use media depictions to formulate their attitudes – especially on uncomfortable topics. Hust et al., (2013) discussed the effect of crime drama television portrayals of rape and subsequent likelihood on participants' intent to intervene (preventing an incident from occurring between friends, strangers, etc.). Controlling for other influences and attitudes toward rape (e.g. acceptance of rape myths), media depictions increased intention to intervene. The researchers reasoned that the severity of rape portrayals motivated participants to adapt preventative behaviors (Hust et al., 2013). In a similar manner, media depictions of chronic pain might positively influence perceptions; moreover, media depictions of chronic pain might motivate individuals to behave more favorably toward, and advocate for, those with chronic pain.

2.3 Chronic Pain and Entertainment Media

Research in attitudes toward chronic pain depictions in entertainment media – a virtually unexplored issue – potentially contributes valuable information to the larger field of chronic pain research (some research explores positive stereotyping of cancer in *ER* and *Grey's Anatomy*, see Hether et al., 2008). Empathy toward individuals in a popular drama, for instance, might impact

how that individual understands real life interactions with chronic pain conditions or understand other media chronic pain depictions.

2.4 Perception of Chronic Pain

Research already supports viewing chronic pain through a social and environmental context. Chronic pain represents and perpetuates a variety of conditions – and follows different treatments. Due to large differences between types of pain, pain expression, and treatments, research organizes chronic pain into cancer-related pain versus non-cancer-related pain (Chibnall & Tait, 1995; Flor & Turk, 2011), and many studies adopt a biopsychosocial perspective (Flor & Turk, 2011). Understanding chronic pain through biological, psychological, and sociological factors helps researchers understand pain as more than just a physical sensation. By adapting the biopsychosocial model, research stresses the importance of viewing pain through a larger social context – outside of personal lifestyle choices and isolated environments.

Understanding how observers process pain behaviors represents an important aspect both for furthering chronic pain research as well as contributing to efforts for treating and reintegrating those with chronic pain conditions. The expression of pain behaviors represents a complex task; it includes non-verbal (body language, facial expressions) and verbal exclamations. The expression of pain behaviors also contains both an intentional and unintentional element (Lumley et al., 2011). Therefore, the observer must engage in a judgment of the pain communication to assess the validity of pain behaviors and expressions (Hadjistavropoulos & Craig, 2002). While empathy facilitates the formation of positive attitudes, many negative judgments of pain communication result from some form of stigmatization (Flor & Turk, 2011; Holloway, Sofaer-Bennett, & Walker, 2007).

Research demonstrates that empathy and stigmatization represent powerful tools when attempting to relate to (or avoid) individuals with pain (Holloway et al., 2007; Lumley et al., 2011; Sambo et al., 2010). Simple exposure to an illness experience narrative potentially increases empathy. Moreover, research demonstrates that empathy potentially buffers individuals against stigma (Lumley et al., 2011). By empathizing with characters depicting chronic pain in entertainment media, individuals might form a more positive attitude and be buffered against stigmatized depictions or situations. Specifically, fostering an interest in the illness experience might reduce stereotypical thinking and subsequent discriminatory behaviors regarding chronic pain. Both stigmatization and empathy are covered in more detail below.

2.5 Empathy

Empathy represents the process of vicariously experiencing the state of something outside of oneself. The shared understanding between the observer and the subject does not require an emotional connection, as is the case of sympathy (Cohen et al, 2011). Research contains varied definitions of empathy, but agrees that it contains an *affective* and a *cognitive* component. Empathizing requires substantial involvement both with the environment – including the communication partner – as well as the introspective level. As a broad definition, empathy acts as a process where individuals take in complex environmental stimuli – body language, facial expressions, tone, etc. – and think about those items as compared to personal experience, prior knowledge, current circumstances, as well as role-taking. The result comprises a reflection of similarities and differences which an individual takes into account when crafting an appropriate response (Reniers et al., 2011).

There is not a substantial amount of research exploring the relationship between pain and empathy (Lumley et al., 2011). With the consideration that research on empathy is varied,

defining a relationship between pain, stigma, and empathy presents a challenge. However, understanding the link between empathy and stigma provides clear benefits. Not only does empathy present a natural buffer against stigma, but empathy is identified as an empowering state which facilitates action (Gerdes, 2011). Sympathy, in contrast, leads to enabling or even destructive behaviors (Gerdes, 2011, p. 4).

Media also draw on the empathizing process. This method represents both an exploitive technique – to coerce the audience – as well as a powerful tool to enhance the audience's conceptualization of a larger, complex world (Ross, 1993). Entertainment media create a significant impact on consumer choices within the marketplace; therefore, the types of programs and messages that producers wish to portray represent a carefully planned process (Argo, Zhu, & Dahl, 2008). Research still explores the nuances of what kinds of media foster or inhibit empathetic responses. Repeated exposure to violent media leads to decreased empathy toward real-world victim situations (Krahé & Möller, 2010). However, media depictions that elicit negative affective responses, in the context of public service announcements, are still able to produce positive empathetic responses within the audience; this also proves true for much of the drama genre (Argo, Zhu, & Dahl, 2008). In horror film, Zillman (1996, 2006) posits that empathy allows the viewer to reach a heightened level of arousal, and experienced greater enjoyment through excitation transfer (a stressful event leading to an ultimately rewarding conclusion). However, Tamborini (1996) found some evidence to suggest that viewers who empathize with pain and suffering – personalizing the content – might struggle to reach a positive emotional state post-resolution.

While research considers empathy to encompass positive and negative emotions, the conscious effort to avoid compassion and empathy can help clarify the relationship between

empathy and stigmatization (Cohen et al., 2011). Cohen et al. (2011) calls the intentional expression of negative emotion or avoidance of compassion the "extinction of empathy" and closely relates it to negative stereotyping (p. 1640). Stigmatization is a multi-dimensional construct, which literature has studied alone as well as (to a lesser extent) in conjunction with empathy.

2.6 Stigmatization

Stigmatization represents the process of stereotyping, labeling, and discrimination – emphasizing someone or something as "different" from the social norm (Cohen et al., 2011). This process frequently occurs with the intent to injure an individual's social standing, especially to devalue an individual's place in a particular social context (Decety et al., 2009). Chronic pain conditions elicit stigmatization which impacts an individual long before he or she reaches a pain clinic (Holloway et al., 2007). Stigmatized situations potentially impact the pain beliefs of persons in pain, such that, "patients' attitudes, beliefs, and expectancies about their plight, themselves, their coping resources, and the health care system affect their reports of pain, activity, disability, and response to treatment," and additionally impact judgments of pain behaviors in the observer (Flor & Turk, 2011, p. 71; Tarrant & Hadert, 2010).

For the person in pain, stigmatization interferes with an individual's motivation to seek out and adhere to prescribed therapies and treatments, as well as reducing quality of life (Alonso et al., 2008). Several areas of stigmatization are studied within the health field: attitudes toward afflicted individuals; stigmatizing practices, services, materials, and legislation; experience of actual discrimination; perceived stigma; and self- or internalized stigma (van Brakel, 2006, p. 309).

Chronic pain represents a commonly stigmatized issue, and attempts to understand the pain or illness experience can help alleviate stigma (Flor & Turk, 2011; Gray, 2007). Attitudes not only impact the intent to directly cause discrimination, but also one's efficacy for intervening in others' acts of discrimination (Hust et al., 2013). Individuals who do not foster an interest in understanding the illness experience of chronic pain might engage more frequently in stereotypical thinking. For example, the "motivational view" perceives an individual in pain as exaggerating his condition in order to obtain greater benefits (Flor & Turk, 2011, p. 7). This and other stereotypical perspectives ultimately lead to discriminatory behaviors (Holloway et al., 2006).

When an issue becomes stigmatized – such is the case with disability, obesity, HIV, drugs, sex, mental illness, and more – discussion of the issue or pursuing healthy behaviors to prevent/manage the issue grows increasingly socially undesirable, taboo, or otherwise difficult (Moyer-Guse et al., 2011). For example, individuals exposed to mentally ill characters who act in a stigmatized fashion – extremely violent, illogical, etc. – are more likely to exhibit negative attitudes and behaviors concerning a mental illness condition or otherwise support stigmatized portrayals and behaviors (Smith, 2007).

Reactions from stigmatized events might, therefore, lead to maladaptive strategies – especially in the case of ambiguous or "invisible" sources of pain, such as non-specific lower back pain (Flor & Turk, 2011; Holloway et al., 2007). Stigmatization of "invisible" conditions – lower back pain, whiplash, and other muskuloskeletal conditions – translates into suspicion over the validity of help-seeking; individuals who experience pain but appear healthy frequently encounter hostile behaviors of others who suspect them of malingering or taking advantage of some undeserved disability benefit. (Cohen et al., 2011; Holloway et al., 2007).

Mass media do not necessarily portray chronic pain in a positive light. Mass media portray many conditions (pain, mental illness, HIV/AIDS, obesity, etc) with a negative bias. For example, in many media depictions, characters with mental illness exhibit dangerous, anti-social, illogical, even evil characteristics (Smith, 2007). Stigma additionally exists for manifestations of pain behaviors – such as the need for disability aids like walking canes (Holloway et al., 2007). Understanding the relationship between stigma and entertainment media depictions of chronic pain plays a key role in steps needed to improve perceptions/attitudes of those with chronic pain, as well as to reduce perceived and internalized stigma in those with chronic pain.

Two stigmatized concepts emerge regularly in health messages related to disability: pity and fear (Wang, 1998). Vivid images of disability as a negative consequence result in fear of acquiring disability, and pity for those who do. As disabilities or consequences increase in severity, so, too, can resulting fear and pity (Wang, 1998).

Media images of chronic pain potentially reduce stigma regarding chronic pain and its behavioral manifestations (van Brakel, 2006). Reducing stigma consistantly remains an important goal to health research, intervention development, and treatment programs (Holloway et al., 2007). Cohen et al. (2011) suggests that stigmatization relates to an abnormal development of empathy. Since empathy primarily acts to help individuals understand others without directly experiencing their current state, empathy which functions abnormally might increase factors of stereotyping, labeling, and emphasizing differences. Likewise, Lumley, et al. (2011) posits that empathy acts as a natural buffer against stigmatized depictions. During the communication process, empathy acts as a prime tool for attempting to relate to, explain, and understand the chronic pain experience – further reducing internalized stigma.

In her essay on television drama as a medical narrative, Gauthier (1999) explains that watching television allows viewers to, "identify emotionally with the characters portrayed and…retain a detached perspective from which critical evaluation of their choices and actions is possible" (p. 23). While research points to an ability to identify with characters, the reasons are varied and not precisely understood (Moyer-Guse et al., 2011). Since empathy provides a natural buffer against stigma in many real life situations with chronic pain, it might represent a promising concept that individuals use to relate to media characters and their depiction of chronic pain. One significant interest of this study relates to how empathy might directly reduce an individual's tendency to agree with stigmatized media content.

2.7 Cultivation Theory

Cultivation theory drives an extant amount of research on attitude formation regarding media. The popularity of the theory rests in its power to explain the long-term effects of watching television, such that long-term television viewing causes individuals to combine their perception of reality with their television experience in an altered world-view from that of light viewers. Individuals rely on the volume and accessibility of television exemplars to formulate attitudes. Moreover, the theorists argue that media exposure is inevitable, where the cultivation process begins from birth (Chory-Assad & Tamborini, 2003; Gerbner, 1998; Reber & Chang, 2000; Quick, 2009). The theory is dependent upon storylines across genres and programs providing consistent messages; this tenet of cultivation theory has been highly disputed (Chory-Assad & Tamborini, 2003; Quick, 2009). Quick (2009) argues that recent television programs spend more time tailoring their content, which supports the view that cultivation forms content-specific attitudes. However, while the tenets are debated, research agrees that he assumptions presented in these narratives, over time, cultivate its audience to a specific set of attitudes

regarding societal norms (Chory-Assad & Tamborini, 2003; Gerbner, 1998). Research found the implications of cultivation theory to be especially true for the entertainment sector (Hetsroni, 2010; Dutta, 2007).

Dutta (2007) explored cultivation theory in the context of health media and attitude change. Specifically, individuals who are motivated to attend health messages will more readily recognize the message, understand the message, and retain long-term attitude change compared to individuals who are not motivated to attend the message. Therefore, individuals who bring personal experiences that are related to the specific content of the program are more likely to experience attitude changes than individuals who cannot relate to the program content. Moreover, individuals who have personal experiences related to the content of a message may be more likely to demonstrate television cultivated attitudes about those messages than individuals who have less interest, and therefore lower motivation to attend, those messages.

Attitude formation may additionally result from heuristic processing (Hetsroni, 2010). In cultivation theory, first-order effects involve the media-emphasized prevalence of a topic with disregard to real-world prevalence, whereas second-order effects involve the process of sharing attitudes supported by media for various media depicted topics (Hetsroni, 2010). This study, concerned with second-order effects, emphasize the media's role of activating and rehearsing judgments through an engaging narrative, thereby making them more accessible and salient via heuristic processing when an individual is reporting attitudes on real-world topics.

Cultivation theory and related conceptual research on empathy and stigma represent the driving force behind the reasoning and formation of the present study as well as its design and analysis. In other words, this study utilizes cultivation theory to understand how entertainment media impact empathy and stigma toward chronic pain.

2.8 Hypotheses

A significant amount of research explores the importance of examining health messages within the entertainment genre of television, however, no research was found on how empathy and stigmatization are studied in entertainment media through cultivation theory; therefore, research on how individuals empathize with or stigmatize chronic pain was used to hypothesize reactions to entertainment media depictions of chronic pain.

Research posits that coming to understand an individual's experience leads to increased feelings of empathy for that individual (Tarrant & Hadert, 2010). In an extensive review of pain and emotions, Lumley et al. (2011) established that observers utilize the process of empathy in order to facilitate their understanding of pain behaviors expressed by an individual in pain. Alternatively, Hadjistavropoulos and Craig (2002) indicate that observers must initially judge the validity of a pain behavior, but if it is perceived as an honest expression, observers are likely to exhibit empathy toward that individual. Furthermore, both Lumley et al. (2011) and Tarrant and Hadert (2010) catalogue the difficulties in reliably eliciting empathy in experimental conditions. This study, therefore, depends on media depictions of chronic pain to be accurate and honest (in regard to the intentions of the character within the context of the story) in order to promote observer trust for pain behaviors. An illness experience narrative, presented through entertainment media, provides a means to understand the difficulties faced by the character depicting pain behaviors (Gray, 2007). Reniers et al. (2010) separate empathy into cognitive (mental understanding) and affective (emotional understanding) components. These ideas provide the premise upon which the first hypothesis was constructed:

H1: When engaged in entertainment media, participants will empathize more with a character expressing pain behavior for both cognitive and affective empathy than participants exposed to healthy media characters, who will empathize less or not at all.

While an insubstantial amount of literature explores the relationship between the empathy and stigmatization processes, various studies lend to a strong connection, to the point of defining stigma as the "extinction of empathy" (Cohen et al., 2011). Moreover, empathy has been shown to buffer against stigma (Lumley et al., 2011). To elicit empathy, a media depiction of chronic pain needs to model a character exhibiting honest pain. Media depictions should also exclude common stigmatizations associated with chronic pain conditions, which include "inferences about pain severity and personality stereotypes" (p. 20). Contextual factors can involve a variety of situations, but can include "those who present in an adversarial manner, complain of severe pain in the absence of medical findings, and who in some way contributed to their injury" (Chibnall & Tait, 1995, p. 20). However, research explains that it is possible to elicit empathy for a stigmatized individual (Tarrant & Hadert, 2010), and that empathy for prior targets within a group can provide a buffer against subsequent stigmatized depictions by creating positively-oriented pain beliefs (Lumley et al., 2011; Tarrant & Hadert, 2010). Therefore, a second hypothesis was constructed for stigmatization:

H2: Participants exposed to entertainment media depictions of chronic pain will report lower levels of stigma toward subsequent stigmatized chronic pain depictions, in a non-fictional depiction, than participants who were exposed to a healthy entertainment media depiction of chronic pain.

A model was constructed to illustrate how media depictions of chronic pain might influence empathy and stigmatization of an individual's perception of chronic pain, or pain beliefs. Beginning with the initial depiction of chronic pain, an individual either identifies the pain behaviors as true or false. When pain behaviors are seen as true or honest, individuals are expected to empathize with the individual in pain, and experience a decrease in stereotypical thinking. The result alters personal pain beliefs to reflect a more positive perception, which potentially buffers the individual against subsequent, stigmatized depictions of chronic pain. When pain behaviors are seen as false, this may exacerbate the stigmatization of the chronic pain condition, and reduce empathic reactions. See figure 1 for an illustration of this model.

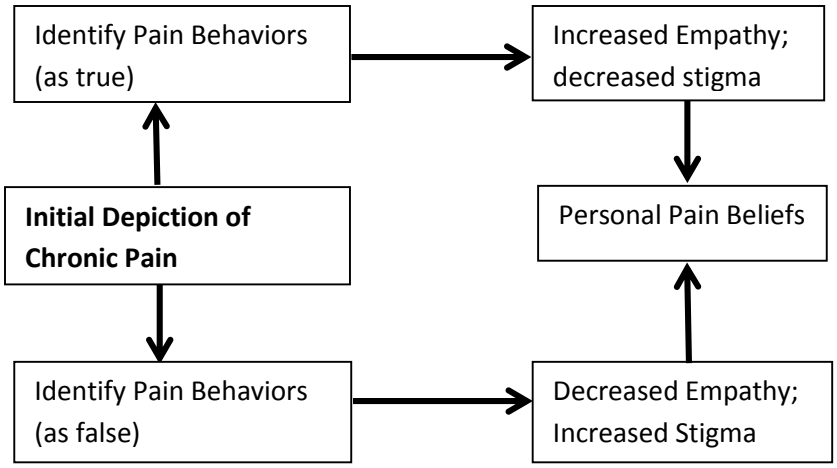

Figure 1: Relationship between media depictions of chronic pain, empathy, and stigma.

CHAPTER 3. METHODS

A mixed experimental design was constructed in order to explore the impact of media depictions of chronic pain on empathy and stigma. The between-groups variable was represented by type of media depiction; one group was randomly assigned to a video of a healthy person, and the other group watched a video of a person in pain. An article featuring an individual in chronic pain was presented to all participants following the video treatment. The within-groups variable aspect of the design explored the impact of a subsequent media depiction of chronic pain. The group of participants who watched the healthy video received their first exposure to a media depiction of chronic pain, whereas the group of participants who watched the pain video experienced their second exposure to a media depiction of chronic pain. The within-groups factor, from here onward, will be referred to as level of chronic pain exposure.

3.1 Stimulus Materials

This study created two video depictions to provide the initial stimulus representing the independent variable – a media depiction of chronic pain. The objective for both videos was to portray an engaging narrative and characters, such as one might experience in entertainment media. The next objective was to select content which could be manipulated such that the character appeared healthy or appeared in pain. Therefore, one video was constructed for the pain condition which encompassed several pain behaviors in an engaging illness experience narrative. The other video was constructed for the healthy condition which excluded all pain behaviors, presenting an engaging narrative of a healthy person.

In order to achieve all objectives laid out for the videos, scenes were taken from *House, M.D.* The television medical drama popularized a character with a chronic pain condition, providing an opportunity for studies looking at chronic pain in entertainment media (Attanasio,

Jacobs, Shore, & Singer, 2004). Dr. Gregory House, a diagnostician, heads a team of doctors at a fictional hospital, Princeton–Plainsboro Teaching Hospital, in New Jersey. A typical episode depicts House and his team diagnosing strange illnesses, while additionally focusing on behavioral interactions and conflict between House, his friends, his coworkers, and his patients. Of interest to this study are the pain behaviors House expresses as he deals with complications from a previous thigh infarction, which results in chronic pain and requiring the use of a walking cane.

House regularly exhibits pain behaviors such as limping, stumbling, and grimacing due to his thigh infarction (tissue death due to an obstruction in blood supply). These behaviors also encompass verbal expressions – such as an exclamation of frustration. The pain behaviors taken alongside his day-to-day interaction make up an illness experience narrative. A popular show when it originally aired (2004-2012) and in reruns, *House, M.D.* clearly engages its audience with its narrative and characters, presenting an opportunity for the public to understand the illness experience of Gregory House.

Utilizing content from *House, M.D.* proved useful in multiple ways. While the show's popularity is a key factor and was mentioned earlier, perhaps the most important aspect of the show is that, for a brief time, Gregory House was able to live and work pain-free. This allowed for relatively cogent video footage for the healthy condition. Similarly, parts of the series focus more on his struggle with pain, providing honest depictions of pain behaviors, without including extraneous stigmatized footage of drugs and alcohol. In sum, easy access to both healthy and pained versions of House, as well as the show's popularity and plethora of available episodes led to the decision to utilize *House, M.D.* as the source for the first stimulus.

A second stimulus, a stigmatized news article, was additionally developed for this study. The second stimulus represented a real-world interaction for participants, and therefore, participants were told that the article was a real story taken from *The New York Times*, and it represented an altered version of the original article (Alvarez, 2010). Both groups read the same article, so only one version was required. The subject featured in the article, Smith, has chronic pain due to injuries sustained after a vehicle accident. The article was adapted from a real article and edited to include less severe injuries and more stigmatized elements (blame, anger, pity, help, dangerousness, fear, avoidance, segregation, and/or coercion). The story described a man who, after a vehicular accident, lost both arms and has to regain his ability to walk through intensive physical therapy. These aspects of the narrative emphasized fear, desire to avoid, and pity. The article emphasized personal responsibility by detailing Smith's decisions to avoid physical therapy. Smith received a substantial amount of help according to the story – his brother moved in to assist him, and he lived on disability. Despite his family's efforts to aid his recovery, he persistently expressed a poor attitude, and even terminated a relationship he began with a woman he met during his recovery due to struggling with his own condition. These last two items create a sense of undeserved benefits.

The article represents the within-groups variable; for participants in the pain condition, the article represents their second media depiction of chronic pain; whereas the healthy condition will read the article as their first media depiction of chronic pain.

3.2 Variables

The definition and measures for empathy originated from a comprehensive review done by Reniers et al. (2011), who defined empathy in two parts: "*cognitive empathy* will be understood as the ability to construct a working model of the emotional states of others, and

affective empathy will be understood as the ability to be sensitive to and vicariously experience the feelings of others" (p. 85).

The dependent variables, empathy and stigmatization are measured through questionnaires. The Questionnaire of Cognitive and Affective Empathy (QCAE) assessed emotions of self and other, and empathetic feelings and attitudes toward others. Empathy was divided into cognitive and affective elements, and this study measured empathy at three intervals: at the beginning (baseline), post-video (empathy for House), and post-article (empathy for Smith). Reniers et al. (2010) provides ample evidence to support assessing cognitive empathy as a separate measure from affective empathy. Cognitive empathy represents a mental picture, sans emotion, whereas affective empathy involves vicariously experiencing an emotional state.

Additionally, participants completed the Attribution Questionnaire 27 item version (AQ-27) in order to measure the expression of stereotypes. These items were developed through literature on mental illness, and some research indicates their applicability to chronic illness and pain conditions (van Brakel, 2006). This study measured stigma at two intervals, by measuring the expression of specific stereotypes. The first measurement, post-video, measured expressions of each stereotype regarding House. The second measurement, post-article, measured these stereotypes regarding Smith. In order to measure stigmatization, the questionnaire was broken down into nine factors shown to be common stereotypes regarding individuals with mental illness. These factors were as follows: blame, anger, pity, help, dangerousness, fear, avoidance, segregation, and coercion. Table 1 illustrates the breakdown of each factor in more detail (See Appendix B for statements listed by stereotype). Each stereotype represents the sum of one to three statements to create the level of expression for that stereotype. Higher numbers reflected

higher levels of expression, and lower numbers indicated little or no expression; the total range of scores went from 3-27 for factors which sum three statements (anger, blame, pity, help, dangerousness, fear, and avoidance), 2-18 for factors using two statements (coercion), and 1-9 for a single statement (segregation).

One independent variable, media depiction of chronic pain, was manipulated through the presence or absence of chronic pain conditions and pain behaviors in a video. Pain behaviors involve verbal and non-verbal expressions of pain that might be intentional or unintentional. Therefore, the healthy condition excluded any behaviors which may be construed as pain behaviors, and conversely, the pain condition emphasized a number of pain behaviors. Both hypotheses were tested using this variable.

Table 1: AQ27 Stereotype Categories

Factor:	Description:	Sample statements:
Blame	How much the individual is blamed for his condition	I would think it is House's own fault he's in his present condition.
Anger	How angry the participant feels regarding the individual	I would feel aggravated by House.
Pity	How much pity the participant feels regarding the individual	I would feel pity for House.
Help*	How much the participant wants to help	I would be willing to talk to House about his problems.
Danger	How dangerous to others the individual appears to be	How dangerous would you feel House is?
Fear	How much the participant fears the individual	How frightened of House would you feel?
Coercion	How much the participant would force the individual to attend treatments and doctors	How much do you agree that House should be forced into treatment with a doctor even if he does not want to?
Segregation	How much the participant wishes to segregate the individual from society	I think House poses a risk to others.
Avoid	How much the participant wishes to avoid the individual	If I were an employer, I would interview this individual for a job.

*not always considered a negative stereotype

3.3 Controls

Literature indicates a number of variables which might impact the empathy and stigma scores for participants forming attitudes about chronic pain. Empathy frequently cites gender differences (Reniers et al., 2010), and stigmatization literature on mental illness recommends controlling for familiarity with conditions when measuring perceptions (Lumley et al., 2011). Therefore, gender, familiarity with chronic pain, and prior knowledge of *House, M.D.* were all considered control variables. Gender was assessed through basic demographic questions, and the Level of Familiarity scale, or LOF, was used to assess experience with chronic pain (Corrigan, Green, Lundin, Kubiak, & Penn, 2001). The LOF was also adapted from mental illness literature, and was meant to allow participants to account for their experience with chronic pain without disclosing any sensitive information. This study adapts the LOF by changing the term "mental illness" to "chronic pain." The result was a series of questions which asked participants to check off if they have seen individuals with chronic pain in the media, at work, in passing, in the family, at home, or have chronic pain themselves. This study created new questions to address prior knowledge of *House, M.D.* which assessed the level of familiarity participants had for the series.

3.4 Sampling and Experimental Procedure

Participants were recruited utilizing two methods. First, participants were recruited using a snowball method through social media. Specifically, messages were posted and shared on Facebook. Second, additional participants were recruited from Mass Communication students at Louisiana State University. These students received credit in exchange for their participation.

All measures and stimuli for this study were developed for online submission. Participants navigated to the questionnaire via a link, and they completed the questionnaire on

any computer with as much time as they needed. Once participants agreed to the consent form, they began the questionnaire by answering baseline empathy measures (QCAE) as well as the control questions developed for familiarity with the character House. Following this, participants were randomly divided into the pain or healthy condition, and watched the appropriate video for their condition. A second set of questions followed the video to provide manipulation checks, the LOF, the QCAE with the character House as the subject, and the Attribution Questionnaire-27 (AQ-27) using the character House as the subject. All participants read the same article featuring Smith, a man who experienced chronic pain after an accident. Following the article, participants answered the QCAE with Smith as the subject, the AQ-27 with Smith as the subject, and finish the questionnaire with basic demographics. This procedure is graphically represented in Figure 2.

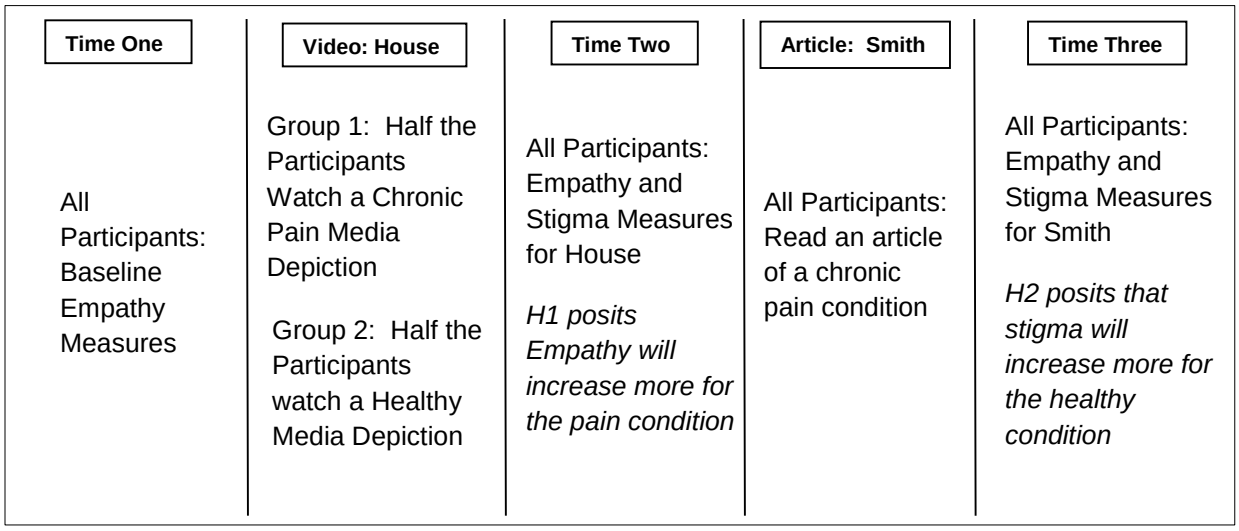

Figure 2: Participant procedure for IV and DVs, read from left to right.

CHAPTER 4. RESULTS

4.1 The Sample

N=185 participants completed this study, after 25 participants were eliminated due to incompletion. Of the remaining sample, 18 percent were male and 82 percent were female. The majority of the sample was White (77%), with the remaining sample consisting of White, Hispanic (6%), Asian (4%), African American (7%), and Native American (1%). Five participants did not account for their ethnicity. Additionally, the bulk of the participants indicated some college for educational experience (67%) with only 13 percent indicating a HS or GED degree, 12 percent indicating an Associate's or Bachelor's, and the remaining 7 percent indicating they possessed a PhD. Of the 181 participants who reported their age, the mean age was 22, with most participants ranging from 19 to 21.

An important part of the description of the sample is participants' experience with chronic pain. Participants who checked nothing were considered to have no experience with chronic pain. Table 2 summarizes the number of participants who checked off each category as a source of their experience with chronic pain.

Table 2: Sources for Chronic Pain Experience

Category	N	Percentage of Participants
A tv show or movie	136	74%
Relative	104	57%
Observed in passing	91	50%
Friend of the Family	82	45%
Observed frequently	69	37%
Documentary	42	23%
Living with	33	18%
Works with	29	16%
I have chronic pain	27	15%
Providing services or treatment	4	2%
No experience	10	5%

An interesting factor was to consider how many items were checked off by participants, however, these items were not found to represent a significant predictor for empathy or stigma. Furthermore, familiarity with *House, M.D.* represented another control variable, and may still represent a valid concern, but only ten participants indicated no familiarity with the show, and, unsurprisingly, familiarity with *House M.D.* was not found to be a significant predictor for empathy or stigma. Therefore, experience with chronic pain and familiarity with *House, M.D.* were not used as control variables in the analysis, although there maybe be alternative, more useful ways to measure these variables.

A repeated-measures ANOVA was used to analyze the data in this experiment. The independent variable, media depiction of chronic pain, was divided into a pain condition and healthy condition. The dependent variables, empathy and stigma, were measured at three different times to obtain the following: baseline scores (for Empathy only), post-video scores (referred to simply as House from here onward), and post-article scores (Smith). Additional analyses were done to examine the role of gender.

4.2 Empathy

The first hypothesis stated that participants exposed to a character depicting chronic pain will exhibit higher levels of empathy towards that character as compared to participants watching a healthy character, while also controlling for personal experience with chronic pain, familiarity with the show, and baseline empathy levels.

Before testing for empathy, a manipulation check was performed. In the pain group, participants rated House as appearing in significantly more pain (M=5.96, SD=1.30, $F(1,1)=158.37$, $p<.001$) than the healthy group (M=3.20, SD=1.67). Moreover, the healthy group

rated House as significantly more healthy (*M*=5.07, *SD*=1.53) than the pain group (*M*=3.17, *SD*=1.62; *F*(1,1)=65.703, *p*<.001).

Empathy was broken down into cognitive and affective empathy in separated analyses. A repeated measures ANOVA for cognitive empathy demonstrated a significant difference over time, such that baseline empathy scores were significantly higher than empathy for House, and empathy for Smith was higher than House, but lower than baseline (*F*(2,181)=62.175, *p*<.001). A pairwise comparison illustrates that scores at baseline, Smith, and House were all significantly different from each other (p<.001). However, no significant differences were found between the two groups (*F*(1,181)=0.155, *p*=0.856). Tables 3 and 4 illustrate the findings for the repeated-measures ANOVA.

Table 3: Descriptive Results for Cognitive Empathy

		Mean	St. Dev.	N
Baseline	Healthy	20.67	3.23	91
	Pain	20.69	2.71	93
Post-Video	Healthy	18.02	3.32	91
	Pain	18.29	2.78	93
Post-Article	Healthy	19.23	3.18	91
	Pain	19.41	3.14	93

Test	Effect	F	df	Sig.	Observed Power
Mauchy's Test of Sphericity	--	--	2	.410	--
*Multivariate Tests for Repeated Measures ANOVA	Time	62.175	2	.000	1.000
	Time*Video	.155	2	.856	.074

A repeated-measures ANOVA for affective empathy had similar findings, where scores were significantly different for baseline, House, and Smith ($F(2,181)=55.825$, $p<.001$). However, there were no differences found between the pain and healthy conditions ($F(2,181)=0.012$, $p=.988$). Pairwise comparisons show that, unlike cognitive empathy, affective empathy for Smith was not significantly different from baseline affect empathy scores. However, these differed significantly from scores for House ($p<.001$). Tables 5 and 6 illustrate the mean values and ANOVA findings for affective empathy.

Table 5: Descriptive Results for Affective Empathy

		Mean	St. Dev.	N
Baseline	Healthy	11.20	2.54	91
	Pain	11.04	2.44	93
Post-Video	Healthy	9.40	2.27	91
	Pain	9.25	2.50	93
Post-Article	Healthy	11.13	2.59	91
	Pain	10.92	2.53	93

Table 6: Results for Affective Empathy

Test	Effect	F	df	Sig.	Observed Power
Mauchy's Test of Sphericity	--	--	2.000	.094	--
*Multivariate Tests for Repeated Measures ANOVA	Time	55.825	2.000	.000	1.000
	Time*Video	.012	2.000	.988	..052

*Pillai's Trace, Wilks' Lamba, Hotelling's Trace, Roy's Largest, Root

The first hypothesis stated that empathy scores at baseline would increase after exposure to a media depiction of chronic pain. The repeated-measures ANOVA results fail to support this hypothesis, since empathy scores actually decrease after participants' initial exposure (see post-video means in Tables 3 and 5). A repeated-measures ANOVA was done on total empathy

scores, and illustrates a drop in empathy for house and an increase in empathy for Smith above and beyond baseline levels (see Table 7 for means). The test found a significant difference over time ($F(2,181)=153.571$, $p<.001$) with no significant differences between groups ($F(2,181)=.075$, $p=.928$). Pairwise comparisons show a significant difference at each time ($p<.001$). However, total empathy should be considered with a note of caution – Reniers et al. (2010) does not suggest combining affective and cognitive empathy, suggesting thatw cognitive empathy may work independently from affective empathy.

Table 7: Descriptive Results for Total Empathy

		Mean	St. Dev.	N
Baseline	Healthy	31.87	4.73	91
	Pain	31.73	3.35	93
Post-Video	Healthy	27.42	4.70	91
	Pain	27.54	4.16	93
Post-Article	Healthy	33.42	5.53	91
	Pain	33.46	5.36	93

Gender was mentioned previously as a variable shown to influence empathy scores. Therefore, each test was repeated with gender as an additional between-groups variable. For affective empathy, gender approached significance in respect to baseline, post-video, and post-article scores ($F(2,181)=2.364$, $p=.097$). For cognitive empathy, females reported higher baseline measures in both healthy ($M=20.84$, $SD=3.20$) and pain ($M=20.73$, $SD=3.20$) conditions as compared to males ($M=19.88$, $SD=3.30$; $M=20.53$, $SD=3.20$). However, they reported lower cognitive empathy after viewing the video for healthy and pain conditions ($M=17.81$, $SD=3.29$; $M=18.03$, $SD=2.61$) than males ($M=19$, $SD=3.41$; $M= 19.35$, $SD=3.35$). Females continued to report lower cognitive empathy for post-article scores ($M=19.19$, $SD=3.25$; $M=19.41$, $SD=3.11$) compared to males ($M=19.65$, $SD=3.24$, $M=19.55$, $SD=3.04$). Gender difference over time were

significantly different ($F(2,181)=5.120$, $p=.007$). Literature suggests females report higher empathy than males, which was supported by baseline measures, however, females responded with less empathy for both the video and the article than males.

Analysis failed to reveal any differences in empathy between the healthy and pain condition. Therefore, the first hypothesis was not supported. Media depictions of chronic pain had no significantly different effect on empathy than the healthy media depiction.

4.3 Stigmatization

The second hypothesis predicted that participants who view an initial media depiction of chronic pain will exhibit lower levels of stigmatization regarding subsequent depictions of chronic pain, as compared to individuals who do not have an initial media depiction of chronic pain. In order to test this hypothesis, one-way ANOVA was performed on post-article stigma scores.

Participants did not significantly differ on any stereotype factors regarding Smith between the healthy and pain conditions (see Table 8 for a list of means). Therefore, hypothesis 2 was not supported. Further tests were done to explore the relationship between stigmatization of House and stigmatization of Smith, as well as to provide a means to discuss the level of stigmatization of House and Smith.

Table 8: Mean Stereotype Scores for Smith

		Blame	Anger	Pity	Help	Perceived Danger	Fear	Desire to avoid	Coercion	Desire to segregate
Healthy N=92	Mean	9.14	7.65	20.27	20.70	6.89	6.38	10.17	10.98	2.02
	SD	4.61	4.73	4.39	5.03	4.30	4.39	4.92	3.81	1.65
Pain N=93	Mean	9.52	8.44	20.34	20.54	7.16	6.69	10.35	10.66	2.00
	SD	4.73	4.69	4.86	5.18	4.14	4.68	5.34	3.68	1.58

Each stereotype scores 3-27 except coercion (3-6) and segregation (6-18).

Table 9: Mean Stereotype Scores for House

		Blame	Anger	Pity	Help	Perceived danger	Fear	Desire to avoid	Coercion	Desire to segregate
Healthy N=92	Mean	13.53*	15.15*	15.91	17.45	12.13*	10.98	13.70	10.56	5.00*
	SD	4.66	5.64	4.50	4.32	5.74	6.23	5.20	3.74	
Pain N=93	Mean	11.86	13.22	18.20*	17.76	9.80	9.85	13.15	10.08	3.00
	SD	4.69	5.58	4.57	5.46	5.05	5.51	5.36	3.67	

Each stereotype scores 3-27 except coercion (3-6) and segregation (6-18).
*significantly higher value, p<.05.

In the healthy version of House, participants expressed significantly higher levels of blame (*M*=13.53, *F*(1,181)=5.86, *p*=.017), anger (*M*=15.15, *F*(1.181)=5.50, *p*=.020), perceived dangerousness (*M*=12.13, *F*(1,181)=8.61, *p*=.004), and desire to segregate (*M*=4.53, *F*(1,181)=16.23, *p*<.001) compared to the pain version of House (*M*=11.86, *M*=13.22, *M*=9.80, and *M*=3.30, respectively).

While participants were significantly more likely to pity House in the pain group (*M*=18.20, F(1,181)=11.734, *p*=.001) as compared to the healthy group (*M*=16.03). There was no significant difference found for desire to help House, fear of House, or desire to avoid House. Moreover, participants expressed only moderate feelings of fear regarding House compared to the other factors, but high levels of pity and desire to help. Table 9 reflects the descriptive findings for House. To facilitate a discussion on overall stigmatization, a new variable was created to encompass the sum of all negative stereotype factors. Negative stigmatization for House averaged the scores for blame, anger, pity, perceived dangerousness, fear, desire to avoid, desire to segregate, and coercion. Chronbach's alpha for these items was .79 for House and .81 for Smith. Regarding the negative stigmatization of House, a significant difference occurred between the healthy condition (*M*=10.68, *F*(1,181)=4.63, *p*<.033) and the pain condition

(*M*=9.95). There was no significant difference between healthy and pain conditions for Smith (reference Table 10).

For each of the nine factors, participants scored significantly differently for Smith as compared to House. Scores for anger, blame, perceived dangerousness, fear, desire to avoid, and desire to segregate were significantly higher for House than Smith. Scores for pity, desire to help, and coercion were significantly higher for Smith than for House.

Scores were divided into discreet categories (minimal, moderate, and high) in order to illustrate the levels of stigmatization of the stimuli in this study. A minimal expression of one statement would be one to three, a moderate expression would be four to six, and a high expression would be seven to nine. Most of the stereotypes represent the sum of three statements – which cause the range of scores to triple. Table 10 illustrates how much participants expressed each stereotype.

Pity and desire to help represent the most strongly expressed factors. Pity is the only factor to score highly across three groups – both groups for Smith as well as the pain condition for House. Every other factor for House in both conditions scored in the range for moderate expression, as did feelings of blame, coercion, and desire to avoid regarding Smith. Anger, fear, and desire to segregate for Smith represent the only minimal expression scores for all stereotype scores (reference Table 10). For the purposes of this study, this suggests that the video depictions of House represent highly stigmatizing material, and the article of Smith represent moderately stigmatizing material.

Table 10: Minimal, Moderate, and High Scores for Stereotypes Per Condition

	House		Smith		
	Pain	Healthy	Pain	Healthy	Average Negative Stigmatization
Blame	xx	xx	xx	xx	*House:*
Anger	xx	xx	x	x	*Healthy* 10.68**
Pity	xxx	xx	xxx	xxx	*Pain* 9.19
Help	xx	xx	xxx	xxx	*Smith:*
Dangerousness	xx	xx	x	x	*Healthy* 9.95
Fear	xx	xx	x	x	*Pain* 9.39
Avoidance	xx	xx	xx	xx	
Coercion*	xx	xx	xx	xx	
Segregation*	xx	xxx	x	x	

x = minimally stigmatizing
xx = moderately stigmatizing
xxx = highly stigmatizing
*all factors sum 3 statements except coercion (2) and segregation (1).
**significantly higher than all other conditions ($p<.05$).

Repeated-measures ANOVA was used to consider the differences between stereotypes for House and Smith. Due to the role blame and anger take in literature discussing the moderating effects of responsibility, these two factors were explored further.

Blame scores for House were significantly higher than blame scores for Smith ($F(1,181)=69.05$, $p<.000$). There was also a significant difference between healthy and pain groups, such that blame was highest for House in the healthy condition, and lowest for Smith in the healthy condition. Video condition had a significant difference, such that blame dropped significantly more from House ($M=13.53$) to Smith ($M=9.14$) in the healthy condition, and blame for House in the pain condition ($M=11.86$) was not as high, and dropped to the same level for Smith ($M=9.5$; $F(1,181)=69.05$, $p=.013$). However, the interaction effect of time and video condition only approached significance ($F(1,181)=3.76$, $p=.054$) when gender was taken into account ($F(1,181)=7.12$, $p=.008$). An identical interaction took place for anger, with participants reporting the most anger for House in the healthy condition and the lowest anger for Smith in

both conditions (see tables 8-9 for mean scores; $F(1,181)=166.812$, $p<.001$ for time; $F(1,181)=171.56$, $p=.005$ for interaction effects). Again, the differences for video interaction effects with time disappear ($F(1,181)=2.294$, $p=.132$) when taking gender into account ($F(1,181)=9.594$, $p=.051$).

A discussion follows on the results gathered from empathy and stigmatization scores. Additionally, insights are provided for the role of gender and stereotyping (specifically, responsibility) in terms of media depictions of chronic pain.

CHAPTER 5. DISCUSSION

This study explored the impact of media depictions of chronic pain on attitude empathy and stigmatization measures. Research lacks literature clarifying the relationship of empathy and stigmatization in regard to chronic pain, as well as empathy and stigmatization in regard to chronic pain portrayed by entertainment media, and this study endeavored to address these gaps. Hypothesis one was not supported- however- results indicate a possible relationship between empathy and stigma which future studies should explore. Following is a more detailed discussion on the results for empathy and stigma regarding media depictions of chronic pain.

5.1 Empathy

This study broke the multi-dimensional concept of empathy down into cognitive and affective components, according to Reniers et al. (2011). Cognitive empathy refers to the ability to comprehend another's experience, whereas affective empathy represents the vicarious experience of another's emotional state (Reniers et al., 2011, p. 85). Previous literature supports the idea that empathy describes the process of understanding the experience of an "other" as though that experience was your own (Cohen et al., 2011; Lumley et al., 2011). This study focused on cognitive and affective empathy, developed according to Reniers et al. (2011).

Research suggests that in order to empathize with a person in pain, individuals must recognize and validate pain behaviors, at which point they will either engage in empathic reasoning in order to understand the illness experience, or otherwise reach a higher level of empathy after the process of understanding the illness experience (Gray, 2007; Hadjistavropoulos & Craig, 2002; Lumley et al., 2011; Tarrant & Hadert, 2010). This study attempted to manipulate only the presence of pain behaviors in order to study the effect a media depiction of chronic pain has on empathy. However, empathy – as the sum of these factors or

taken individually – dropped after exposure to House regardless of which condition the participant experienced; therefore, the first hypothesis failed.

Despite individuals judging the pain behaviors as valid, participants experienced a decrease in empathy. Moreover, this was true for both affective and cognitive empathy. This suggests participants additionally expressed a lower understanding of House's illness experience. Lowered empathy, and lowered cognitive empathy in particular, has greater implications for chronic pain and media literature. First, individuals may employ other factors when processing pain behaviors which impact their willingness to engage in either empathy or understanding the illness experience of the person in pain.

In this study, the depiction of chronic pain behaviors was communicated through a male doctor character in an entertainment media setting. Recent cultivation theory literature suggests that opinions toward doctors depicted in the entertainment sector may be increasingly negative (Chory-Asaad & Tamborini, 2003). One of the tenets of cultivation theory posits that storylines are consistent across genres and programs, however, Chory-Asaad and Tamborini (2003) and Quick (2009) found differences in type of program. In both cases, doctors were viewed more negatively in the entertainment sector and more positive in other sectors, such as news. Therefore, a media depiction of chronic pain depicted by a doctor may have elicited lower affective empathy due to cultivation effects.

Unlike House, participants expressed a cognitive understanding of Smith's situation. However, empathy scores remained below baseline measures. Due to the design of this study, scores may have resulted due to Smith's story coming second in the series, however, the results may help support current research. According to Lumley et al. (2011), empathy is required to reach a cognitive understanding of the person in pain, but this study indicates a drop in affective

empathy for Smith, whereas cognitive empathy remained at baseline levels. Therefore, some support is lent for Tarrant and Hadert (2010) who posit that empathy occurs only after an understanding of an individual's situation takes place. Moreover, this suggests that an additional condition, above and beyond a cognitive understanding, must be met in order to elicit empathy in for a media depiction of chronic pain.

A second explanation may explain lowered affective empathy for Smith. By causing participants to express lower affective empathy for House, participants may have found it more difficult to empathize with a subsequent depiction of chronic pain. This may explain why participants expressed lower levels of affective empathy, even though their cognitive empathy scores suggest they understood Smith's illness experience.

A third explanation which can be offered for lower affective scores for Smith, is that since participants failed to empathize with House, they were not buffered against the stereotypes presented in the article, and the stigmatized depiction caused lowered empathy. Decety et al. (2009) identify several stereotypes which potentially impact empathy scores including perceived similarity and likability of the subject. Specifically, the researchers posit that attributing responsibility (blame and anger) to a stigmatized subject will moderate their ability to empathize with that subject. Essentially, individuals will experience less empathy for a person who is stigmatized as their perceived responsibility increases (p. 286). Tarrant and Hadert (2010) found that participants are capable of empathizing with individuals who are part of a stigmatized group, but only when specifically instructed to empathize.

5.2 Stigmatization

Previous literature indicates that empathy acts as a buffer against stigma (Lumley et al., 2011). Individuals with high empathy scores were more likely to identify pain behaviors in

others and perceive them as more painful, as well as less likely to assign blame to others. The primary goal of this study was to illustrate that individuals who watched a character depicting chronic pain empathized more than individuals watching the healthy version; the second goal was to illustrate that empathy for an initial depiction provided a buffer against subsequent stigmatized media depictions of chronic pain. While this information was discussed in terms of empathy results, it also merits discussion in terms of stigmatization.

For the purpose of analysis, this study divided stigma scores into low, moderate, and high. Smith was moderately stigmatized by participants, suggesting that the efforts made to create a stigmatized depiction of chronic pain were successful. An interesting aspect of this experiment is that participants were able to affectively and cognitively empathize more with Smith than with House. This may potentially have resulted from Smith's lower levels of stigmatization. In this light, stigmatization may act as a moderating variable for affective empathy, such that higher levels of stigmatization cause lower expressions of empathy. This supports research which identifies responsibility as a moderating variable (Decety et al., 2009). Additionally, further exploration of the various stereotypes may shed light on other variables that participants consider in addition to judgments of pain behavior.

Lower stigmatizations were reported for House in the pain condition than for House in the healthy condition. While this did not significantly impact empathy according to the analysis, it does have two possible explanations from current literature. First, as previously mentioned, cultivation theory illustrates a negative attitude toward doctors in entertainment media (Chory-Assad, 2003; Quick, 2009), therefore, higher levels of stigmatization may have already been attributed to doctors. Second, pain behaviors did alleviate some of those negative stereotypes, therefore, the expression of pain behaviors, at the very least, stymied negative attitudes regarding

House. Research exploring the extent to which perceived responsibility moderates empathy focused on AIDS/HIV. It is possible, then, that perceived responsibility behaves differently when examining pain behaviors, especially those involved with an obvious (highly visible) pain condition.

5.3 Limitations

This study in particular was dominantly female. Research provides evidence for gender differences in regard to empathy, and this study supports those findings. However, females exhibited a tendency to skew results in both directions – higher and lower expressions of empathy. Future research may want to consider this pattern. The sample was also dominantly young, college-age adults, which may impact attitudes regarding chronic pain, due to the fact that chronic pain is more prevalent with age.

In addition, much of the research in social sciences cautions self-report research due to the impact of social desirability (Decety et al., 2009). This study asks participants to rate their opinions on a variety of sensitive topics, which on a generic scale might not trigger any guilt or shame associated with their response, but when built into the perspective for subjects such as Smith, participants might feel inclined to portray themselves in a better light. While questions are worded to help participants answer honestly, social desirability is always a concern in research involving self-report.

This research also utilized a doctor as the character depicting the chronic pain condition. This may have confounded results for empathy, as it is suggested by cultivation research that doctors are viewed in a negative light. Furthermore, House may represent a too well-known character. This study might have been able to control for familiarity if more participants were unfamiliar with the show.

For chronic pain, limitations may include the type of condition portrayed, the severity of the condition, as well as an individual's experience with pain (as a person with a pain condition, or as a person who interacts with others with pain conditions). However, there is evidence that some generalization can occur as long as groups are related enough (Tarrant & Hadert, 2010). With this in mind, some exploration might be done for similarities and differences in pain conditions and the implications for grouping.

5.4 Implications

Clarifying the relationship between perception of pain, empathy, and stigma, can assist in alleviating stereotypes on chronic pain conditions. Furthermore, if research explores how entertainment media can elicit empathy for pain behaviors, than television shows can adapt these mechanisms in order to improve perceptions of chronic pain. Research has already shown that empathy is a powerful tool when communicating and understanding chronic pain conditions, and people in pain are less likely to see a health professional if they perceive too much stigma (Lumley et al, 2011). A useful theory to apply in future research may be priming.

Priming refers to the process of promoting a specific idea or construct, thereby increasing attention paid to surrounding issues (Holbrook & Hill, 2005). Priming theory may provide a unique framework for exploring the effects of initial exposure on subsequent exposure, as was the case in this design. Moreover, Holbrook & Hill (2005) posit that priming increases the likelihood that individuals access fictional exemplars even when addressing issues of non-fiction. Unlike cultivation theory, priming might assist with exploring a single exposure to a media depiction of chronic pain. With cultivation or priming theory, research should consider a focus on the relationship between empathy and stigmatization.

5.5 Conclusions and Future Research

Future research would benefit from examining empathy at various levels of stigmatization (neutral/benign, moderate, and high) to parse apart the relationship between empathy and stigma. Results from this study indicate that more success might be found in depictions of pain from non-doctors as well as doctors if studied within the entertainment sector, as well as less well-known shows. However, cross-referencing these results with cultivation studies on attitudes toward doctors in entertainment media may reveal novel relationships.

While this research did not successfully promote empathy for a media depiction of chronic pain, several important relationships emerged between stigmatization and empathy in the presence of chronic pain behaviors. This relationship might additionally be affected by the presence of pain behaviors. Continuing to explore the role of pain behaviors and the illness experience in studies on empathy and stigmatization will greatly enhance the ability to construct a working model, which will benefit both chronic pain literature and literature on entertainment media.

REFERENCES

Alonso, J., Buron, A., Bruffaerts, R., He, Y., Posada-Villa, J., Lepine, J. P., et al. (2008). Association of perceived stigma and mood and anxiety disorders: Results from the World Mental Health surveys. *ACTA Psychiatrica Scandinavica, 118*, 305-314. doi: 10.1111/j.1600-0447.2008.01241.

Argo, J. J., Zhu, R. J., & Dahl, D. W. (2008). Fact or fiction: An investigation of empathy differences in response to emotional melodramatic entertainment. *Journal of Consumer Research, 34*, 614-623. doi: 0093-5301/2008/3405-001.

Attanasio, P., Jacobs, K., Shore, D., & Singer, B. (Producers). (2004). *House, M.D.* [Television series]. Los Angelos: Fox Broadcasting Company.

Brodie, M., Foehr, U., Rideout, V., Baer, N., Miller, C., Flournoy, R., & Altman, D. (2001). Communicating health information through the entertainment media: A study of the television drama ER lends support to the notion that Americans pick up information while being entertained. *Health Affairs, 20*(1), 192-200.

Caputo, N. M., & Rouner, D. (2011). Narrative processing of entertainment media and mental illness stigma. *Health Communication, 26*, 595-604. doi: 10.1080/10410236.2011.560787

Chibnall, T. J., & Tait, C. R. (1995). Oberserver perceptions of low back pain: Effects of pain report and other contextual factors. *Journal of Applied Social Psychology , 25*(5), 418-439.

Chory-Assad, R.M., Tamborini, R. (2003). Television exposure and the public's perception of physicians. *Journal of Broadcasting and Electronic Media. 47*(2), 197-215.

Cohen, M., Quintner, J., Buchanan, D., Nielsen, M., & Guy, L. (2011). Stigmatization of patients with chronic pain: The extinction of empathy. *Pain Medicine, 12*, 1637-1643.

Corrigan, P.W., Green, A., Lundin, R., Kubiak, M.A. & Penn, D.L (2001). Familiarity with and social distance from people with serious mental illness. *Psychiatric Services*, 52, 953-958.

Decety, J., Echols, S., & Correll, J. (2009). The blame game: The effect of responsibility and social stigma on empathy for pain. *Journal of Cognitive Neuroscience, 22*(5), 985-997. doi: 10.1162/jocn.2009.21266.

Dutta, M.J. (2007). Health information processing from television: The role of health orientation. *Health Communication, 21*(1), 1-9.

Flor, H., & Turk, D. C. (2011). *Chronic Pain: An Integrated Biobehavioral Approach.* Seattle: International Association for the Study of Pain Press.

Gauthier, C. C. (1999). Television drama and popular film as medical narrative. *Journal of American Culture, 22*(3), 23-25.

Gerbner, G. (1998). Cultivation analysis: An overview. *Mass Communication & Society, 1*(3/4), 175-194.

Gray, J. B. (2007). Interpersonal communication and the illness experience in the Sex and the City breast cancer narrative. *Communication Quarterly, 55*(4), 397-414. doi: 10.1080/01463370701657889.

Hadjistavropoulos, T. &. (2002). A theoretical framework for understanding self-report and observational measures of pain: A communications model. *Behavior Research and Therapy , 40*, 551-570.

Hether, H. J., Huang, G.C., Beck, V., Murphy, S.T., & Valente, T.W. (2008). Entertainment-education in a media-saturated environment: Examining the impact of single and multiple exposures to breast cancer storylines on two popular medical dramas. *Journal of Health Communication, 13,* 808-823. doi: 10.1080/10810730802487471

Hetsroni, A. (2010). When the wind changes direction: The impact of content shift on the cultivation effect, 439-460. doi: 10.1515/COMM.2010.023.

Holbrook, R.A., & Hill, T.G. (2005). *Agenda-setting and priming in prime time television: Crime dramas as political cues, 22,* 277-295. doi: 10.1080/10584600591006519.

Holloway, I., Sofaer-Bennett, B., & Walker, J. (2007). The stigmatisation of people with chronic back pain. *Disability and Rehabilitation, 29*(18), 1456-1464. doi: 10.1080/09638280601107260.

Hust, S.J., Marett, E.G., Lei, M., Change, H., Ren, C., McNab, A.L., & Adams, P.M. (2013). Health promotion messages in entertainment media: Crime drama viewership and intentions to intervene in a sexual assault situation. *Journal of Health Communication: International Perspectives, 18*(1), 105-23. doi: 10.1080/10810730.2012.688241

Krahé, B., & Möller, I. (2010). Longitudinal effects of media violence on aggression and empathy among German adolescents. *Journal of Applied Developmental Psychology, 31*(5), 401-409. doi: 10.1016/j.appdev.2010.07.003.

Langlieb, A. M., Cooper, C. P., & Gielen, A. (1999). Linking health promotion with entertainment television. *American Journal of Public Health , 89* (7), 1116-1117.

Lumley, M. A., Cohen, J. L., Borszcz, G. S., Cano, A., Radcliffe, A. M., Porter, L. S., et al. (2011). Pain and emotion: A biopsychosocial review of recent research. *Journal of Clinical Psychology, 67*(9), 942-968. doi: 10.1002/jclp.20816.

Moyer-Gusé, E., Chung, A.H., & Jain, P. (2011). Discussion of taboo topics after exposure to an entertainment narrative about sexual health. *Journal of Communication,61*(3), 387-406. doi: 10.1111/j.1460-2466.2011.01551.

Reniers, R. L., Corcoran, R., Drake, R., Shryane, N. M., & Völlm, B. A. (2011). The QCAE: A questionnaire of cognitive and affective empathy. *Journal of Personality Assessment, 93*(1), 84-95. doi: 10.1080/00223891.2010.528484.

Ross, J. W. (1993). Media messages, empathy, and social work. *Health & Social Work, 18*(3), 163-164. doi: 10.1093/hsw/18.3.163.

Sambo, C. F., Howard M., Kopelman, M., Williams, S., & Fotopoulou, A. (2010). Knowing you care: Effect of perceived empathy and attachment style on pain perception. *Journal of Pain, 151*, 687-693.

Smith, R. (2007). Media depiction of health topics: Challenge and stigma formats. *Journal of Health Communication, 12,* 233-249. doi: 10.1080/10810730701266273

Strauman, E. C., & Goodier, B. C. (2011). The doctor(s) in House: An analysis of the evolution of the television doctor-hero. *Journal of Medical Humanities , 32* (1), 31-46.

Tamborini, R. (1996). A model of empathy and emotional reactions to horror. In J. B. Weaver & R. Tamborini (Eds.), Horror films: Current research on audience preferences and reactions (pp. 103–123). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Tarrant, M., & Hadert, A. (2010). Empathic Experience and Attitude Toward Stigmatized Groups: Evidence for Attitude Generalization. *Journal of Applied Social Psychology,40*(7), 1635-1656.

van Brakel, W. H. (2006). Measuring health-related stigma - a literature review. *Psychology, Health & Medicine, 11*(3), 307-334. doi: 10.1086/521907.

Wakefield, M.A., Loken, B., & Hornik, R.C. (2010). Use of mass media campaigns to change health behavior. *The Lancet, 376,* 1261-71. doi: 10.1016/S0140-6736(10)60809-4

Wang, C.C. (1998). Portraying stigmatized conditions: Disabling images in public health. *Journal of Health Communication, 3,* 149-159.

Zillmann, D. (1996). The psychology of suspense in dramatic exposition. In P. Vorderer, H. J. Wulff, & M. Friedrichsen (Eds.), Suspense: Conceptualizations, theoretical analyses, and empirical explorations (pp. 199–231). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Zillmann, D. (2006). Empathy: Affective reactivity to others' emotional experiences. In J. Bryant & P. Vorderer (Eds.), Psychology of entertainment (pp. 151–181). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

APPENDIX A: IRB APPROVAL

Application for Exemption from Institutional Oversight

LSU

Institutional Review Board
Dr. Robert Mathews, Chair
131 David Boyd Hall
Baton Rouge, LA 70803
P: 225.578.8692
F: 225.578.5983
irb@lsu.edu
lsu.edu/irb

Unless qualified as meeting the specific criteria for exemption from Institutional Review Board (IRB) oversight, ALL LSU research/ projects using living humans as subjects, or samples, or data obtained from humans, directly or indirectly, with or without their consent, must be approved or exempted in advance by the LSU IRB. This Form helps the PI determine if a project may be exempted, and is used to request an exemption.

– Applicant, Please fill out the application in its entirety and include the completed application as well as parts A-F, listed below, when submitting to the IRB. Once the application is completed, please the completed application to the IRB Office or to a member of the Human Subjects Screening Committee. Members of this committee can be found at http://research.lsu.edu/CompliancePoliciesProcedures/InstitutionalReviewBoard%28IRB%29/Item24737.html

– A Complete Application Includes All of the Following:
- **(A)** A copy of this completed form and a copy of parts B thru F.
- **(B)** A brief project description (adequate to evaluate risks to subjects and to explain your responses to Parts 1&2)
- **(C)** Copies of all Instruments to be used.
  *If this proposal is part of a grant proposal, include a copy of the proposal and all recruitment material.
- **(D)** The consent form that you will use in the study (see part 3 for more information.)
- **(E)** Certificate of Completion of Human Subjects Protection Training for all personnel involved in the project, including students who are involved with testing or handling data, unless already on file with the IRB. Training link: (http://phrp.nihtraining.com/users/login.php)
- **(F)** IRB Security of Data Agreement: (http://research.lsu.edu/files/item26774.pdf)

1) Principal Investigator: Rebecca E Lang **Rank:** Graduate student

Dept: Mass Communication **Ph:** 814-571-3955 **E-mail:** r_lang@windstream.net

2) Co Investigator(s): please include department, rank, phone and e-mail for each
*If student, please identify and name supervising professor in this space

Judith Sylvester
Associate Professor
Dept. of Mass Communication
jsylves@lsu.edu 225-578-2067

IRB# E8335 LSU Proposal #
- ✓ Complete Application
- ✓ Human Subjects Training
- ✓ IRB Security of Data Agreement

3) Project Title: Chronic Pain in Entertainment Media: Using Empathy to reduce Stigma

Study Exempted By:
Dr. Robert C. Mathews, Chairman
Institutional Review Board
Louisiana State University
203 B-1 David Boyd Hall
225-578-8692 | www.lsu.edu/irb
Exemption Expires: 6/10/2016

4) Proposal? (yes or no) No **If Yes, LSU Proposal Number**

Also, If YES, either ○ **This application completely matches the scope of work in the grant**
OR ○ **More IRB Applications will be filed later**

5) Subject pool (e.g. Psychology students) Mass Communication students & volunteers through social media

*Circle any **"vulnerable populations" to be used:** (children <18; the mentally impaired, pregnant women, the ages, other). Projects with incarcerated persons cannot be exempted.

6) PI Signature Rebecca E Lang **Date** 5/20/2013 (no per signatures)

**** I certify my responses are accurate and complete.** If the project scope or design is later changes, I will resubmit for review. I will obtain written approval from the Authorized Representative of all non-LSU institutions in which the study is conducted. I also understand that it is my responsibility to maintain copies of all consent forms at LSU for three years after completion of the study. If I leave LSU before that time the consent forms should be preserved in the Departmental Office.

Screening Committee Action: Exempted X Not Exempted ___ Category/Paragraph ___

Signed Consent Waived?: Yes / No

Reviewer Meghan Sanders **Signature** [signature] **Date** 6/11/13

MSW

APPENDIX B: SCORING FOR AQ-27

Original Attribution Questionnaire 27:

PLEASE READ THE FOLLOWING STATEMENT ABOUT HARRY:

Harry is a 30 year-old single man with schizophrenia. Sometimes he hears voices and becomes upset. He lives alone in an apartment and works as a clerk at a large law firm. He had been hospitalized six times because of his illness.

NOW ANSWER EACH OF THE FOLLOWING QUESTIONS ABOUT HARRY. CIRCLE THE NUMBER OF THE BEST ANSWER TO EACH QUESTION.

(not at all) 1 2 3 4 5 6 7 8 9 (very much)

1. I would feel aggravated by Harry.

2. I would feel unsafe around Harry.

3. Harry would terrify me.

4. How angry would you feel at Harry?

5. If I were in charge of Harry's treatment, I would require him to take his medication.

6. I think Harry poses a risk to his neighbors unless he is hospitalized.

7. If I were an employer, I would interview Harry for a job.

8. I would be willing to talk to Harry about his problems.

9. I would feel pity for Harry.

10. I would think that it was Harry's own fault that he is in the present condition.

11. How controllable, do you think, is the cause of Harry's present condition?

12. How irritated would you feel by Harry?

13. How dangerous would you feel Harry is?

14. How much do you agree that Harry should be forced into treatment with his doctor even if he does not want to?

15. I think it would be best for Harry's community if he were put away in a psychiatric hospital.

16. I would share a car pool with Harry every day.

17. How much do you think an asylum, where Harry can be kept away from his neighbors, is the best place for him?

18. I would feel threatened by Harry.

19. How scared of Harry would you feel?

20. How likely is it that you would help Harry?

21. How certain would you feel that you would help Harry?

22. How much sympathy would you feel for Harry?

23. How responsible, do you think, is Harry for his present condition?

24. How frightened of Harry would you feel?

25. If I were in charge of Harry's treatment, I would force him to live in a group home.

26. If I were a landlord, I probably would rent an apartment to Harry.

27. How much concern would you feel for Harry?

The AQ-27 Score Sheet:

The AQ-27 consists of 9 stereotype factors; scores for each factor are determined by summing the items as outlined below: Note: items are reversed score prior to summing up for the Avoidance scale.

_____ Blame = AQ10+ AQ11 +AQ23

_____ Anger = AQ1 + AQ4 + AQ12

_____ Pity = AQ9 + AQ22 + AQ27

_____ Help = AQ8 + AQ20 + AQ21

_____ Dangerousness = AQ2 + AQ13 + AQ18

_____ Fear = AQ3 + AQ19 + AQ24

_____ Avoidance = AQ7 + AQ16 + AQ26 (Reverse score all three questions)

_____ Segregation = AQ6 + AQ15 + AQ17

_____ Coercion = AQ5 + AQ14 + AQ25

The higher the score, the more that factor is being endorsed by the subject.

APPENDIX C: QUESTIONNAIRE

Adapted Questionnaire of Cognitive and Affective Empathy: Baseline

	strongly disagree	slightly disagree	slightly agree	strongly agree
I sometimes find it difficult to see things from the 'other guy's' point of view	❍	❍	❍	❍
I am usually objective when I watch a film or play, and I don't often get completely caught up in it	❍	❍	❍	❍
I try to look at everybody's side of a disagreement before I make a decision	❍	❍	❍	❍
I sometimes try to understand my friends better by imagining how things look from their perspective	❍	❍	❍	❍
When I am upset at someone, I usually try to 'put myself in his shoes' for a while	❍	❍	❍	❍
Before criticizing someone, I try to imagine how I would feel if I was in their place	❍	❍	❍	❍
I often get emotionally involved with my friends' problems	❍	❍	❍	❍
People I am with have a strong influence on my mood	❍	❍	❍	❍
I often get deeply involved with the feelings of a character in a film, play or novel	❍	❍	❍	❍
I get very upset when I see someone cry	❍	❍	❍	❍
It worries me when others are worrying and panicky	❍	❍	❍	❍
It is hard for me to see why some things upset people so much	❍	❍	❍	❍
Friends talk to me about their problems as they say that I am very understanding	❍	❍	❍	❍
I find it easy to put myself in somebody else's shoes	❍	❍	❍	❍
I can usually appreciate the other person's viewpoint, even if I do not agree with it	❍	❍	❍	❍
I usually stay emotionally detached when watching a film	❍	❍	❍	❍
I always try to consider the other fellow's feelings before I do something	❍	❍	❍	❍
Before I do something I try to consider how my friends will react to it	❍	❍	❍	❍

Please select which response best fits you regarding the show House, M.D.:

- ❍ I am familiar with the show, and I know the story line.
- ❍ I am familiar with the show, but I do not remember the story line.
- ❍ I heard of the show, but I know almost nothing about it.
- ❍ I never heard of this show.

Present video stimulus here

Please answer the following questions regarding ONLY the video you just watched:

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly Agree
House appeared to be in pain	❍	❍	❍	❍	❍	❍	❍
House appeared to be healthy	❍	❍	❍	❍	❍	❍	❍

	True	False
He spent time in his office	❍	❍
He spent time in his home	❍	❍
In part of the video, he was cooking	❍	❍
He interacted with a patient	❍	❍
In part of the video, he was playing cards	❍	❍

LOF Questionnaire

- ❑ I have watched a movie or television show (prior to this study) in which a character depicted a person with chronic pain.
- ❑ My job involves providing services/treatment for persons with severe chronic pain.
- ❑ I have observed, in passing, a person I believe may have had a chronic pain condition.
- ❑ I have observed persons with a chronic pain condition on a frequent basis.
- ❑ I have a chronic pain condition.
- ❑ I have worked with a person who had a chronic pain condition at my place of employment.
- ❑ I have never observed a person that I was aware had a chronic pain condition.
- ❑ A friend of the family has a chronic pain condition.
- ❑ I have a relative who has a chronic pain condition.
- ❑ I have watched a documentary on television about chronic pain.
- ❑ I live with a person who has a chronic pain condition.

Adapted Questionnaire of Cognitive and Affective Empathy: House

	not at all (1)	2	3	4	5	6	7	8	very much (9)
I would feel aggravated by House	❍	❍	❍	❍	❍	❍	❍	❍	❍
I would feel unsafe around House	❍	❍	❍	❍	❍	❍	❍	❍	❍
House would terrify me	❍	❍	❍	❍	❍	❍	❍	❍	❍
How angry would you feel at House?	❍	❍	❍	❍	❍	❍	❍	❍	❍
If I were in charge of House's treatment, I would require him to take his medication	❍	❍	❍	❍	❍	❍	❍	❍	❍
I think House poses a risk to others	❍	❍	❍	❍	❍	❍	❍	❍	❍
If I were an employer, I would interview House for a job	❍	❍	❍	❍	❍	❍	❍	❍	❍
I would be willing to talk to House about his problems	❍	❍	❍	❍	❍	❍	❍	❍	❍
I would feel pity for House	❍	❍	❍	❍	❍	❍	❍	❍	❍
I would think that it was House's own fault that he is in his present condition	❍	❍	❍	❍	❍	❍	❍	❍	❍
How controllable, do you think, is the cause of House's present condition?	❍	❍	❍	❍	❍	❍	❍	❍	❍
How irritated would you feel by House?	❍	❍	❍	❍	❍	❍	❍	❍	❍
How dangerous would you feel House is?	❍	❍	❍	❍	❍	❍	❍	❍	❍
How much do you agree that House should be forced into treatment with another doctor even if he does not want to?	❍	❍	❍	❍	❍	❍	❍	❍	❍
I would share a car pool with House every day	❍	❍	❍	❍	❍	❍	❍	❍	❍
I would feel threatened by House	❍	❍	❍	❍	❍	❍	❍	❍	❍
How scared of House would you feel?	❍	❍	❍	❍	❍	❍	❍	❍	❍
How likely is it that you would help House?	❍	❍	❍	❍	❍	❍	❍	❍	❍
How certain would you feel that you would help House?	❍	❍	❍	❍	❍	❍	❍	❍	❍
How much sympathy would you feel for House?	❍	❍	❍	❍	❍	❍	❍	❍	❍
How responsible, do you think, is House for his present condition?	❍	❍	❍	❍	❍	❍	❍	❍	❍
How frightened of House would you feel?	❍	❍	❍	❍	❍	❍	❍	❍	❍
If I were a landlord, I probably would rent an apartment to House	❍	❍	❍	❍	❍	❍	❍	❍	❍
How much concern would you feel for House?	❍	❍	❍	❍	❍	❍	❍	❍	❍

	strongly disagree	slightly disagree	slightly agree	strongly agree
I found it difficult to see things from House's point of view	❍	❍	❍	❍
During House's interactions, I tried to look at everybody's side of a disagreement before I make a decision	❍	❍	❍	❍
When I am upset at someone, I usually try to 'put myself in his shoes' for a while	❍	❍	❍	❍
Before critcizing House, I tried to imagine how I would feel if I was in House's place	❍	❍	❍	❍
I felt I understood House better by imagining how things look from his perspective	❍	❍	❍	❍
I got emotionally involved in the problems presented in this video	❍	❍	❍	❍
It was hard for me to see why people got upset in this video	❍	❍	❍	❍
Watching House had a strong influence on my mood.	❍	❍	❍	❍
I stayed emotionally detached during this video	❍	❍	❍	❍
I find it easy to put myself in House's shoes	❍	❍	❍	❍
I can appreciate House's viewpoint, even if I do not agree with it	❍	❍	❍	❍
When considering how I felt about House, I thought about what my friends might think.	❍	❍	❍	❍

The following excerpt originates from an article taken from The New York Times. Please read over the article and answer the following related questions.

The official-sounding voice, hoping to cushion the blow, asked when he had last spoken to Brendan. The day before. They had talked about a motorcycle that the father was eyeing. The son, a motor head, was urging him to buy it; one day, they could ride side by side.

Not wishing to delay the inevitable, Mr. Smith demanded, ''Tell me what happened and where it happened.'' The voice paused, then said, ''I'm sorry to have to tell you this, but Brendan was involved in a car accident and he lost both his arms, and suffered extensive damage to both legs.'' His vehicle was one of many involved in an interstate pile-up.

Mr. Smith’s knees buckled. He fell on the kitchen floor. As the weeks passed, the Smiths were forced to look further down the road. The parents each considered quitting work, but each had a mortgage to pay. And the son, while grateful for his divorced parents' dedication, was afraid they might suffocate him. He was a grown man. Then his brother did something nobody expected: he volunteered to leave his friends, his social life and his job in information technology at Citigroup, and move to Washington.

Since May 2009, the brothers have lived together in connecting dormitory-style rooms, with a kitchen and maid service. Brendan receives disability benefits to aid his living expenses.
The older brother wakes the younger each morning, gives him his pain medication and a glass of water, and ''that's about it, managing the pain'' Michael said. Brendan has come a long way from when he struggled to put on his own T-shirt and brush his teeth. The two leave at 9 a.m. for physical therapy, a short wheelchair ride away. Brendan struggles to regain function of his legs, but the process is long and frustrating. Sometimes he refuses to go.

It did not take long after the accident for his wry, dark humor to break through. ''I can move my hand around and give someone the finger,'' he said. ''I can do these things, and no one can see.'' KATE BARTO, a beautiful, grounded 23-year-old from Johnstown, Pa., who was an intern with a nonprofit group last summer, could not help but notice Smith in his wheelchair. But it was his charming wisecracks that really got her attention.

''One of my mom's concerns was that I was feeling sorry for him,'' Ms. Barto said. '' 'Do you really love him? Do you pity him?'

In April, Ms. Barto said, Smith grew increasingly stressed as the calendar ticked toward his ''alive day'' -- the anniversary of the car accident that nearly killed him -- and he broke off their relationship.

Smith is still struggling to find his place in the wider world. His family tries to coax him out of his fortress for more trips to shopping malls, restaurants and sporting events. But he finds such outings draining and awkward. People stare, or look away. They ramble, not knowing what to say. He shrugged. ''I don't like it, but I can't do anything about it. I just pretend they are not looking.

''His mother was more direct: ''He hates it. But I wish he would do more to help himself.''

Ms. Barto is still hoping to move to New York with him. She said they had talked about having children, and that Smith wanted a girl, if only so he could answer the door when a date arrived and say the words, ''You should see what happened to the other guy.''

The following questions assess the knowledge of the article you just read:

	True	False
The individual featured in the article was a healthy man	❍	❍
The article featured a married couple	❍	❍
The story involved pain or illness	❍	❍
The story involved a vehicular accident	❍	❍

	not at all (1)	2	3	4	5	6	7	8	very much (9)
I would feel aggravated by Smith	❍	❍	❍	❍	❍	❍	❍	❍	❍
I would feel unsafe around Smith	❍	❍	❍	❍	❍	❍	❍	❍	❍
Smith would terrify me	❍	❍	❍	❍	❍	❍	❍	❍	❍
How angry would you feel at Smith?	❍	❍	❍	❍	❍	❍	❍	❍	❍
If I were in charge of Smith's treatment, I would require him to take his medication	❍	❍	❍	❍	❍	❍	❍	❍	❍
I think Smith poses a risk to others	❍	❍	❍	❍	❍	❍	❍	❍	❍
If I were an employer, I would interview Smith for a job	❍	❍	❍	❍	❍	❍	❍	❍	❍
I would be willing to talk to Smith about his problems	❍	❍	❍	❍	❍	❍	❍	❍	❍
I would feel pity for Smith	❍	❍	❍	❍	❍	❍	❍	❍	❍
I would think that it was Smith's own fault that he is in his present amount of pain	❍	❍	❍	❍	❍	❍	❍	❍	❍
How controllable, do you think, is the cause of Smith's present pain?	❍	❍	❍	❍	❍	❍	❍	❍	❍
How irritated would you feel by Smith?	❍	❍	❍	❍	❍	❍	❍	❍	❍
How dangerous would you feel Smith is?	❍	❍	❍	❍	❍	❍	❍	❍	❍
How much do you agree that Smith should be forced into treatment with another doctor even if he does not want to?	❍	❍	❍	❍	❍	❍	❍	❍	❍
I would share a car pool with Smith every day	❍	❍	❍	❍	❍	❍	❍	❍	❍
I would feel threatened by Smith	❍	❍	❍	❍	❍	❍	❍	❍	❍
How scared of Smith would you feel?	❍	❍	❍	❍	❍	❍	❍	❍	❍
How likely is it that you would help Smith?	❍	❍	❍	❍	❍	❍	❍	❍	❍
How certain would you feel that you would help Smith?	❍	❍	❍	❍	❍	❍	❍	❍	❍
How much sympathy would you feel for Smith?	❍	❍	❍	❍	❍	❍	❍	❍	❍
How responsible, do you think, is Smith for his present pain?	❍	❍	❍	❍	❍	❍	❍	❍	❍
How frightened of Smith would you feel?	❍	❍	❍	❍	❍	❍	❍	❍	❍
If I were a landlord, I probably would rent an apartment to Smith	❍	❍	❍	❍	❍	❍	❍	❍	❍
How much concern would you feel for Smith?	❍	❍	❍	❍	❍	❍	❍	❍	❍

	strongly disagree	slightly disagree	slightly agree	strongly agree
I found it difficult to see things from Smith's point of view	❍	❍	❍	❍
Regarding Smith's interactions, I tried to look at everybody's side before I made a decision	❍	❍	❍	❍
I tried to put myself 'in his shoes' for a while	❍	❍	❍	❍
Before critcizing Smith, I tried to imagine how I would feel if I was in Smith's place	❍	❍	❍	❍
I felt I understood Smith better by imagining how things look from his perspective	❍	❍	❍	❍
I got emotionally involved in the problems presented in this article	❍	❍	❍	❍
It was hard for me to see why people got upset in this article	❍	❍	❍	❍
Reading about Smith had a strong influence on my mood	❍	❍	❍	❍
I stayed emotionally detached regarding this article	❍	❍	❍	❍
I find it easy to put myself in Smith's shoes	❍	❍	❍	❍
I can appreciate Smith's viewpoint, even if I do not agree with it	❍	❍	❍	❍
When considering how I felt about Smith, I thought about what my friends might think.	❍	❍	❍	❍

The following questions are for demographic information purposes only. Select 'no response' if you prefer not to answer.

What is your gender?

- ❍ Male
- ❍ Female
- ❍ No response

What is your ethnicity?

- ❍ White, non-Hispanic
- ❍ White, Hispanic
- ❍ Asian
- ❍ Pacific Islander
- ❍ African American
- ❍ Hispanic
- ❍ Native American
- ❍ Other _____
- ❍ No response

What is your age in WHOLE NUMBERS? (e.g. 31)

- ❍ I am __ years old: _____
- ❍ No response

What is the highest level of education YOU have COMPLETED?

- ❍ Less than High School
- ❍ High School or GED
- ❍ Some college
- ❍ 2 year college degree (Associates)
- ❍ 4 year college degree (BA, BS)
- ❍ Master's
- ❍ Doctorate
- ❍ Professional (MD, JD)
- ❍ No response

What is the highest level of education your PARENTS have COMPLETED?

- ❍ Less than High School
- ❍ High School or GED
- ❍ Some college
- ❍ 2 year college degree (Associates)
- ❍ 4 year college degree (BA, BS)
- ❍ Master's
- ❍ Doctorate
- ❍ Professional (MD, JD)
- ❍ No response

Please identify your religious affiliation:

- ❍ Protestant Christian
- ❍ Evangelical Christian
- ❍ Roman Catholic
- ❍ Jewish
- ❍ Hindu
- ❍ Muslim
- ❍ Buddhist
- ❍ Other _____
- ❍ Atheist or agnostic
- ❍ No response

Are you participating in this study through the Media Effects Lab at LSU?

- ❍ Yes
- ❍ No

THE VITA

Rebecca Lang graduated with two Bachelor's from Pennsylvania State University. While there, she studied Media Effects as well as Psychology. Her interest in chronic pain arose from a vehicular accident, and from there forward, Rebecca studied the impact of various concepts on chronic pain. Having personal experience with chronic pain can impact the research of chronic pain by producing bias, but generally, Rebecca finds the process useful for guiding the exploration, much like one might use a wiki to begin the hunt for a more reliable source.