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**Modeling Lesbian, Gay, and Bisexual Patient Disclosures: An Exploration of the Role of Memorable Messages, Past Experiences, Perceived Visibility, Screening Behaviors, and Efficacy**

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**by**

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## **Dedication**

Dad, this is for you, in honor of your own hard work. Mom, this is for you, for teaching me about my love of reading and learning.

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**Modeling Lesbian, Gay, and Bisexual Patient Disclosures: An  
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The University of Texas at Austin, 2015

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Lesbian, gay, and bisexual (LGB) people in the United States face unique challenges such as the denial of civil and human rights, discrimination, and societal stigma (HealthyPeople.gov). These challenges facilitate additive minority stress, as evidenced by significantly poorer physical and mental health outcomes for LGBs as compared to heterosexuals. One root of these health disparities is a disclosure-based dilemma in the patient-provider context. Summarized, this dilemma is: “Should I reveal my sexual orientation to my doctor and risk discrimination or stigmatization, or should I conceal my sexual orientation and risk not receiving quality medical care that is tailored to my needs as a patient?” This study investigated competing, predictive models, all of which are grounded in existing research regarding interpersonal health communication and LGB health. The models hypothesized that the following variables predict likelihood of disclosure of sexual orientation: Memorable messages about sexual orientation and receiving care, past disclosure experiences in the patient-provider context, self-perceived visibility of sexual orientation, and patients’ pre-screening behaviors of providers. Disclosure efficacy and target efficacy were predicted to mediate these relationships. LGB individuals ( $N = 209$ ) completed an online questionnaire about receiving health

care. Results revealed that disclosure efficacy mediated the predictive relationship between positivity of a past disclosure experience and likelihood of future disclosure. Significance of a past disclosure experience directly, negatively predicted likelihood of future disclosure. Some evidence indicated that self-perceived visibility of sexual minority status positively predicted likelihood of future disclosure. Results failed to support the predictive power of memorable messages and patients' pre-screening behaviors of providers. Theoretical contributions to interpersonal communication models of disclosure are offered, as are practical contributions meant to address patient-provider interactions and, more broadly, the reduction of health disparities for LGB individuals.

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# **Chapter 1: Introduction, Literature Review, and Rationale**

## **INTRODUCTION**

Interpersonal health communication can be summarized as the health- and illness-related interactions that occur within a complex web of personal and professional relationships, across multiple modalities, and against the backdrop of broader social structures and policies (Duggan, 2006; Dutta, 2010; Parrott & Kreuter, 2011). From the moment we are born, humans exist within this complex health communication web. Interpersonal relationships are inevitable and necessary to navigate health care systems, receive preventative care and treatment, and generally to sustain life. The intersection of these two areas of study, interpersonal communication and health, seeks to describe, explain, and sometimes predict, how and why relationships and messages matter to issues surrounding wellness and illness. In other words, for communication scholars, communicating about health is a process that involves negotiations between patients, providers, and patients' relational partners that may be involved in abstract constructions of the meaning of wellness as well as practical and immediate treatment decisions in the case of illness. These processes may lead to an achievable "state of health," however, this achievement is impossible without interpersonal communication.

Communication between patients, providers, and patients' close others can influence a range of health predictors, health experiences, and health outcomes. Duggan and Thompson (2011) outlined a few of these major areas of influence, including patient satisfaction, quality of life for the patient and his or her relational partners, medical adherence to a treatment plan, instances of malpractice lawsuits against care providers, and the relative success or failure of health interventions. Interpersonal communication in health contexts is an important predictor or mediator variable of health-related outcomes

like managing uncertainty (Brashers, 2001; Mishel, 1988) and adherence to a medication regimen.

In addition to the importance of interpersonal communication, it is important to consider health-related structural (e.g., policy, economic) inequalities and barriers that exist in the United States. Communication can influence the successful or unsuccessful navigation through these inequalities, much as it influences health predictors, health experiences, and health outcomes. The broad purpose of this manuscript is to investigate how lesbian, gay, and bisexual (LGB) patients navigate disclosure decisions in health care settings. Although LGB people face many of the same health issues as their heterosexual counterparts, these sexual minorities have additional concerns with which they must deal. The root of these additional concerns is disclosure-based, and it is best described as a double bind. The double bind is a contradictory desire to self-disclose sexual minority status to further develop an interpersonal relationship while simultaneously fearing social rejection (Wells & Kline, 1987). Gershman (1983) described the twin anxieties of revealing or concealing one's sexual minority status as a "Catch 22." Dindia (1998) viewed the double bind as a specific example of the contradiction assumption in a dialectical perspective. The contradiction assumption states that, "Social systems involve contradictory and opposing forces (e.g., openness-closedness)... Individuals continually face the contradictory impulses to be open and disclosive versus closed and protective of the self or of other" (Dindia, 1998, p. 84).

The focus of the current project is on the double bind as it relates to LGB health communication. Although the LGB population is highly variable in terms of socioeconomic status, age, and geographic location, the common thread is that all of these individuals must confront the double bind: "Should I disclose my sexual minority status to my doctor and risk discrimination or stigmatization, or should I conceal my

sexual minority status and risk not receiving quality medical care that is tailored to my needs?" In order to examine the disclosure double bind, I will draw on two strands of research: Health disparities and stigma. Each strand informs the other, and each is enacted through interpersonal communication.

Because disclosure is central to the double bind, which is a communicative manifestation of structural barriers LGB individuals face when obtaining health services, this project is grounded in the disclosure decision-making model (DD-MM; Greene, 2009; Greene, Derlega, & Mathews, A., 2006; Greene, Derlega, Yep, & Petronio, 2003; Greene et al., 2012). The DD-MM was founded on three areas of interpersonal communication theory: Relational dialectics (Baxter, 1990), communication privacy management (CPM, Petronio, 2002), and uncertainty management theory (UMT, Brashers, 2001). The multiple goals perspective (Caughlin & Vangelisti, 2009) can also help explain why individuals make health disclosure decisions. Each of these frameworks, distilled into a modified version of the DD-MM, can illuminate how, when, and why individuals disclose private information to others. Greene and colleagues (2012) wrote of the DD-MM, "[the DD-MM] seeks to examine what factors are quantitatively weighed in this disclosure decision process...with uncertainty related to specific predictors of disclosure decisions at the core" (p. 357). By examining the LGB population, I hope to make a contribution to each of these frameworks and offer some practical contributions to patients, their care providers, and equitable care advocates.

### **SEXUAL MINORITY STATUS AND HEALTH DISPARITIES**

According to Ndiaye and colleagues (2011), there is a lack of research attention to lesbian, gay, bisexual, and transgender (LGBT) health disparities, and this lack of attention is "a form of disparity [itself] because it impedes the development of

treatments" (p. 472). The authors suggested that scholars first acknowledge that LGBT people experience health differently than heterosexual people experience health. Next, the authors suggested that researchers study LGBT people beyond their sexual behaviors so as not to neglect other important health issues.

Most illnesses do not distinguish their host on the basis of sexual identity, however, sexual identity translates to health and communication differences between groups. Relieving health disparities is a "complex communication task" (Ndiaye, Krieger, Warren, & Hecht, 2011, p. 470). Certain populations are more or less likely to contract specific diseases or face various challenges when obtaining treatment or even routine, preventive care. It is important to explicate what it means to be a sexual minority and how that affects physical and mental health. Next, an interpretation of some of the structural barriers that are responsible for the differences in the health status of sexual minorities and heterosexuals in the United States is offered, and some facts and research about the health of sexual minorities are presented.

Awareness of sexual minority health issues arguably began with Alfred Kinsey's research on human sexuality in the late 1940s and early 1950s and with debates within the American Psychiatric Association about how to classify homosexuality (Mayer, Bradford, Makadon, Stall, Goldhammer, & Landers, 2008). The women's liberation movement in the 1960s and 1970s sparked a similar movement for lesbians and gay men in the same decades. In the 1980s, the government did not extend state- or nationally-funded assistance and resources to the HIV epidemic. Sexual minorities banded together as activists, communities, and health care providers for one another. In the 1990s, the National Coalition for LGBT Health was formed by nearly one hundred American organizations such as the National Gay and Lesbian Task Force and the AIDS Action Committee of Massachusetts (Mayer et al., 2008). LGBT health objectives exist in the

Healthy People 2010 and Healthy People 2020 (HealthyPeople.gov) programs. The Federal Interagency Workgroup's stated goal is to "improve the health, safety, and well-being of lesbian, gay, bisexual, and transgender individuals" (2013). The structural barriers that they have identified, in order of macro to micro, are the denial of civil and human rights, discrimination, and societal stigma.

### **Denial of Civil and Human Rights**

The denial of civil and human rights to LGBT individuals is in regard to local, state, and federal policies which prevent this group from receiving equitable treatment by governmental and governmentally affiliated organizations. In June 2013, the Supreme Court handed down a decision that said the federal government would recognize same-sex marriages allowed by individual states (supremecourt.gov). This decision does not make same-sex marriage federally legal, but it does prevent the federal government from voiding marriages in states where same-sex marriage laws exist (Appendix A). Legal marriage status is a factor in over 1,000 federal laws. Some of these relevant laws that are described here.

Spousal survivor benefits and other social security benefits, veteran and military spousal health benefits, and immigration benefits now exist for same-sex married couples in states where marriage is legal. Same-sex spouses employed by the federal government are now eligible for health insurance for spouses, living or deceased. Despite these recent policy changes, there is still much work to be done to ensure equitable care for all. According to a 2009 Presidential Memorandum, federal employers are encouraged to allow employees to use sick time to care for same-sex partners and their children, add a partner to their "long-term care insurance program," and allow partners of the Foreign

Service medical care when abroad. These are important benefits, but it is necessary to remember that they exist only for married employees of the federal government.

Notably, there is no national-level protection against sexual minority status-related discrimination (Human Rights Campaign, 2013). States that do not allow same-sex marriage, and states in which individuals can be fired for being gay complicate employment, economic, and most relevant to the current project, health insurance issues for LGBT people. States that do allow same-sex marriage are the exception, and as of March 2014, there are only 17 of them (National Conference of State Legislatures). Although this may indicate some progress in terms of policy, 29 states explicitly prohibit same-sex marriage. Other states allow same-sex civil unions or registered domestic partnerships, but this recognition rarely translates to health insurance and other benefits for partners. As of March 2014, there are 29 states in which an individual can be fired simply for being gay (Human Rights Campaign). The 2013 passing of the Employment Non-Discrimination Act can help LGB individuals obtain health insurance through their employer. Since the recent passing of the Affordable Care Act, the Out2Enroll campaign was developed to be an online resource for LGBT Americans in need of health insurance. Other state and local policies that concern LGBT people are pending.

### **Discrimination**

Stigma, discrimination, prejudice, and the denial of civil and human rights are separate, yet highly interconnected, processes. If stigma is defined as an attribute that is discrediting to the individual who exhibits it (Goffman, 1963), then discrimination can be thought of as systematized stigma. According to the researchers at Healthy People 2020, stigma happens on an individual, or micro, level. Discrimination happens at a group, or mezzo, level. The denial of civil and human rights happens on a policy, or macro, level.

Prejudice against a certain group is something that an individual may have, but prejudice is not always communicated. Prejudice can be communicated through stigmatizing behavior, discrimination, or the denial of civil and human rights for a group. Discrimination and prejudice, whether or not they are directly communicated to an individual, have important health consequences for LGBT people.

Some researchers have conceptualized the experience of discrimination and prejudice as a minority stress. Antonovsky (1979) defined stress as "the strain that remains when tension is not successfully overcome" (p. 3). For LGBT people, the stress of being a sexual minority is never fully overcome. Stress can be a precursor or a consequence of becoming ill, and stress affects the physical, emotional, cognitive, behavioral, physiological, and social aspects of life (Bendelow, 2009). Minority stress is chronic and socially, or communicatively, based. A final important point about minority stress is that it is additive (Meyer, 2007). In other words, LGBT individuals must deal with the stress that a member of the sexual majority would not ordinarily deal with in encountering health care providers in addition to the stress of being a sexual minority. This additive stress puts more pressure on the LGBT individual to adapt to a potentially unpleasant and stigmatizing communication event. In their study of bisexual and lesbian women with breast cancer, Boehmer and Case (2004) wrote, "When women who partner with women are confronted with this diagnosis, they must make an additional decision about whether they should disclose their sexual orientation to medical providers treating them for breast carcinoma" (p. 1882). My guiding research question involves answering how LGB patients communicate with health care providers at the micro level given challenges at the mezzo and macro levels related to stigma and discrimination.

## **Sexual Minority Status**

Sexual minority status describes members of the population whose gender or sexuality fall outside of a typically mainstream, two-sex heterosexual system (Herek, Chopp, & Strohl, 2007). For the purposes of the current project, I focus on the sexuality rather than the gender piece of the definition. Specifically, I focus on LGB<sup>1</sup> individuals as a subset of a bigger sexual minority group. Scholars in the area of gay and lesbian studies or queer studies view LGB identities as being a subset of a much longer acronym. A longer acronym, like LGBTQIA, encompasses lesbian, gay, bisexual, transgender, queer, intersex, and asexual identities, respectively ("LGBTQIA Resource Center Glossary," 2014). Even all of these labels do not capture the full spectrum of identities and orientations. Gender diverse, gender queer, and gender non-conforming are labels that individuals who do not experience gender as a binary might use to describe themselves (Donatone & Rachlin, 2013). Some, but not all, LGB individuals describe themselves as queer ("LGBTQIA Resource Center Glossary," 2014). The wide and complex array of identities and orientations translates to a highly variable set of experiences for sexual minorities.

## **The LGB Experience**

Existing programs of research have identified some trends in terms of LGB physical and mental health (e.g., Ryan, Wortley, Easton, Pederson, & Greenwood, 2001). Biologically speaking, LGB people are qualitatively no different from heterosexuals (Byne, 2007), so it is important to investigate reasons beyond the body that help explain why these differences in health outcomes exist. It is not enough to know that LGB individuals are at greater risk for a host of health issues and illnesses; Further

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<sup>1</sup> LGB-identified individuals, regardless of gender identity, were eligible to participate in the current study.

investigation is necessary and can move the United States toward a more equitable system of care, which would help meet the stated goals of the national Healthy People 2020 program. LGB bodies may not be different, but the lived, bodily experiences are. The embodied self can explain this phenomenon. Conceptualizing bodies as "acting mind-body unities" (Freund, 1990, p. 457) means that social experiences and cultural factors produce physical reactions in the body. Feeling powerless, blameworthy or having thoughts and emotions invalidated from those with more social power (e.g., physicians, heterosexuals) can affect physical functioning. If this kind of minority stress is chronic, it can affect neurohormonal regulation (Bendelow, 2009), which is necessary for good cardiovascular health. If the regulatory process is strained or fails, heart disease is likely. The LGB social experience in interpersonal and health contexts stands apart from the mainstream, heterosexual experience. If communication creates these circumstances and this reality, how may communication undo or redo LGB interpersonal health experiences?

### **Physical Health**

Important differences exist between the physical health of LGBTs<sup>2</sup> and heterosexuals in the United States. Substance abuse is a sizable issue in LGBT communities. For instance, LGB individuals are up to 40% more likely to smoke cigarettes than heterosexual individuals (Ryan et al., 2001). Smoking leads to a variety of health issues including lung cancer, heart disease, bone thinning, and emphysema. Cigarette use accounts for approximately 30% of all deaths from cancer (American Cancer Society, 2013). Lesbians and gay men have higher rates of alcohol consumption,

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<sup>2</sup> Cited research describes data from LGB only and LGBT samples because both kinds of samples inform the current project.

which is linked to increased rates of physical violence, sexually transmitted infections (STIs), and chronic diseases (Woodial & Brindle, 2008).

Some physical health issues are unique to lesbians and gay men, respectively. Lesbian and bisexual women have an increased risk of breast and gynecological cancers, some STIs, obesity, and heart disease. In one study, of the women who had sex with women in the past three years, 92% reported engaging in unprotected oral sex, 25% engaged in vaginal fisting without using a latex barrier, and 29% reported sharing dildos without using a latex barrier (Lemp et al., 1995). The increased risk of breast and gynecological cancers can be at least partially attributed to this group being less likely to receive preventative medicine including annual check ups, pap smears, and breast exams (Matthews, Brandenburgh, Johnson, & Hughes, 2004). There is no simple biological reason why this group of sexual minority status women is more affected than heterosexual women, which suggests that more research is needed to understand the health behaviors (e.g., accessing care) and interpersonal communication (e.g., disclosure) of sexual minority women and men.

An example of this necessary work is researchers who are working to clarify issues related to obesity. In past decades, researchers proposed that higher rates of obesity exist among lesbian women as compared to heterosexual women because one of the following propositions is true: 1) lesbian women do not adhere to mainstream cultural female body ideals the way that heterosexual women do; 2) lesbian women are not held to the same untenable beauty standards as heterosexual women are (Brand, Rothblum, & Solomon, 1992). These propositions illustrate an arguably heterosexist approach. Markey and Markey (2013) dispelled these propositions in their recent study of women of various weights in same-sex romantic relationships. Women with a body mass index (BMI) in a "normal" range did not report weight concerns; however, women with BMIs in the

"overweight" range with "normal" range partners reported many weight concerns. The authors conclude that these differences exist because the overweight partner is aware that her partner's weight is socially desirable, while her own is not. This indicates that sexual minority women, like heterosexual women, are concerned about weight. This is a developing area of study relevant to interpersonal health communication.

Gay and bisexual men have a greater risk of methamphetamine use, disordered eating, and HIV contraction than their heterosexual counterparts (Diaz, 2007). Again, there is no simple biological reason why this group is more affected than other groups. One socially focused reason for this is that methamphetamine use is part of gay club drug culture, and it can be produced relatively easily. Negative effects of the drug are appetite suppression, irregular heartbeat, mood swings, and possible coma or death (Partnership for a Drug-Free America, 2013). Disordered eating includes anorexia and bulimia. Internalized homophobia is related to body shame, which mediates the relationship between body surveillance and disordered eating (Wiseman & Moradi, 2010). Cultural standards of masculinity and attractiveness and media messages can also contribute to body shame and body surveillance. Disordered eating has harmful physical effects like kidney, cardiovascular, and dental damage. Domestic partner violence and hate crimes are important issues that bridge physical and mental health.

### **Mental Health**

Differences exist between the mental health of LGBs and heterosexuals in the United States. Depression and anxiety, like the physical health issues explicated above, are more likely to affect LGB people than to affect heterosexual people. Some of the mental health challenges that LGBs face can be linked explicitly to sexual minority identification, such as navigating anti-gay violence and decisions about coming out

(Woodial & Brindle, 2008). Domestic partner violence in same-sex relationships can involve threats of "outing" someone against his or her will as a means of control. Bullying is an important mental health issue for adolescent and young adult LGB students. Over 85% of LGBT adolescents reported being verbally harassed because of their sexual minority status, and about half of those adolescents reported physical harassment (Russell, Ryan, Toomey, Diaz, & Sanchez, 2011). There is a strong positive correlation between experiencing verbal or physical harassment and lower self-esteem and poor social adjustment. Additionally, victimization is linked to higher suicide rates among LGBT individuals (e.g., Haas et al., 2010). Lesbian and gay adolescents living in counties without sexual orientation-specific anti-bullying school policies in place are more than twice as likely to attempt suicide as adolescents living in counties with these policies in place (Hatzenbuehler & Keyes, 2013). It is likely that these policies can also contribute to higher self-esteem and better social adjustment for LGB youth, which can have positive physical and mental health consequences long into adulthood.

### **Communication Approaches to Addressing LGB Health Disparities**

Many organizations (e.g., Human Rights Campaign, Healthy People 2020) and individuals spend much time and money working towards equality for all. Recommendations to health care providers with LGB patients are plentiful, such as in Shankle's *Handbook of LGBT Public Health: A Practitioner's Guide to Service* (2006). For example, partnering with community representatives, using "creative" strategies, and the development of scientifically sound interventions are suggested by the authors. Near the end of many interpersonal health communication research articles, readers find practical recommendations for health care providers so that they may better address and cope with the structural barriers that their patients face. For example, Boehmer and Case

(2004) suggested that providers should avoid the assumption that all patients are heterosexual and should create opportunities for disclosure. Changing the phrasing of medical history questions on forms and in conversation to be inclusive of same-sex behaviors and relationships would "alleviate the burden of repeated disclosure" for the patient (Boehmer & Case, 2004, p. 1888). However, problems of stigma, discrimination, and prejudice persist. Since researchers know that receiving care is a process that involves multiple stakeholders (e.g., providers, patients), it is worth investigating what these stakeholders can do to improve the health care experience.

Historically, perhaps the most common recommendation to providers who interact with LGB individuals is to de-medicalize sexual minority statuses. In other words, providers should avoid suggesting that being LGB is an illness or medical abnormality. Since the 1970s, medical textbooks and research monographs have made more specific recommendations to providers. These recommendations include using gender neutral pronouns when referring to sexual partners, explaining why detailed questions about sexual activity must be asked before doing so, interacting with colleagues non-discriminatorily (i.e., modeling good behavior), asking if it is okay to ask about sexual history, and using direct, normalizing language (e.g., "many women experience difficulty with..." or "it is not uncommon to experience..."; Washer, 2009). Some researchers have recommended that physicians and other care providers use behaviorally-focused language rather than identity-focused language (Bonvicini & Perlin, 2003). For instance, asking if a man has had sexual contact with a man can be perceived as less threatening and more accurate than asking if a man is gay. It is important to note that not all people who have same-sex sexual contact identify as LGB or queer (Flores, Mansergh, Marks, Guzman, & Colfax, 2009). Just as with heterosexual patients, it is preferable for providers to use clear, simple, and neutral language.

Other researchers have argued for a model of cultural competency. In general, cultural competency involves perceiving LGB people as being part of a community and facing community-wide challenges like increased risk for alcohol and cigarette use and abuse, increased risk of methamphetamine use for gay men, et cetera (Woodial & Brindle, 2008). Other recommendations based in a cultural competency model include being aware of perceived or enacted stigma rooted in heterosexism and homophobia, creating a welcoming environment by using inclusive, sensitive language, and recognizing one's own potential for discriminatory thoughts and behavior. In their focus groups of LGBT patients and in their focus groups of providers who treat LGBT patients, Wilkerson and his colleagues (2011) identified structural components (e.g., decor), systemic components (e.g., policies and forms), and interpersonal components (e.g., a trusting provider-patient relationship) that contribute to an overall culturally competent clinic. They reported, "Trust appeared to be inextricably linked to feeling safe in the clinical space and influenced decisions by health care providers and patients to come out as LGBT" (p. 383). Although the authors offered many recommendations for modifying structural components (e.g., put a rainbow sticker on the door) and systemic components (e.g., ask about preferred pronouns on medical intake forms), they offered almost no recommendations about the interpersonal components. Rather, they noted that just one negative provider-patient interaction can damage a clinic's reputation within a local LGBT community.

Bonvicini and Perlin (2003) identified and explained 15 recommendations for providers to communicate their acceptance and inclusion of gay and lesbian patients. For example, they suggested that providers use "gender-neutral" and "sensitive" language with patients and allow patients to "provide information at [their] own pace" (p. 120). Bonvicini and Perlin (2003) also suggested that providers communicate a "message of

acceptance when discussing significant relationships" and "acknowledge and encourage inclusion of partners or significant others in health care" (p. 120). The authors also acknowledged that providers may not follow these recommendations because of heterosexist or prejudicial clinician attitudes, medical training that does not often address the needs of lesbian and gay people, and misunderstandings on the part of the provider about the role of significant others and loved ones in the health care process.

Cegala (2006) recommended trainings for patients belonging to underserved populations that focus on patients' preferences for involvement. He suggested that these trainings should be assessed based on the effects they have on health outcomes. Duggan and Thompson (2011) identified patient training focused on shared decision-making with providers and recognizing mutual provider-patient influence as areas for future directions in this area of research. Furthermore, they recommended that scholars work towards "a broader application of theory as explanatory frameworks... given the unique dynamics of provider-patient interaction" (p. 423). Finally, they identified health status and quality of life as two essential outcomes of provider-patient communication. This project aims to provide a theoretical explanatory framework for patient disclosures to providers with the broader goal of reducing health disparities and increasing the quality of life for LGB individuals accessing the health care system.

### **DISCLOSURE IN LGBT POPULATIONS**

In the following section, I review existing scholarship regarding disclosure processes in LGBT populations. I begin with a discussion of stigma as an important context for disclosure processes and move on to summarize the disclosure literature and, more specifically, sexual minority status disclosure research.

## **Stigma**

Stigma is a unique structural barrier because it is inherently communicative. Smith (2011) wrote, "World health agencies argue that stigma may well be the leading and least understood impediment to health promotion, treatment, and support" (p. 464). Sexual minorities are a stigmatized population in the United States. Goffman (1963) defined stigma as an attribute that is discrediting to the individual who exhibits it. In the context of the proposed investigation, stigmatizing communication occurs when a LGB patient perceives a health professional exhibiting disparaging attitudes towards people of sexual minority status. Examples include avoiding eye contact, which can symbolize a lack of comfort with the patient; brusque tones indicating disdain; standing outside of arm's reach during a medical encounter; exhibiting nervousness; ignoring a patient; and offering substandard care (Rintamaki, Scott, Kosenko, & Jensen, 2007). Stigmatizing communication about sexual minority status and health can occur between health professionals, patients, and patients' relational partners. Stigmas are formed, sustained, and socialized through communication (Smith, 2011).

Arguably, heterosexism is a root cause of stigmatizing communication. Herek and his colleagues (2007) defined heterosexism as being comprised of "the organizing rules whereby the institutions of society make gay and bisexual people invisible in most social situations or, when they become visible, designate them as appropriate targets for hostility, discrimination, and attack" (p. 173). An example of heterosexism is members of a cancer care team assuming the heterosexuality of patients unless the patient explicitly disclosed her sexual orientation as not heterosexual (Boehmer & Case, 2004). Boehmer and Case described how in one patient's case, the doctor addressed her as "Mrs." and began asking questions about her husband as a way to build rapport.

Stigma, as a result of heterosexism, can be perceived or enacted. Perceived, or felt, stigma (Goffman, 1963) means feeling like others would engage in stigmatizing behavior (e.g., avoidance, discrimination) if they knew about the "condition" (sexual minority status, in this context). Enacted stigma is the observable avoidance, name-calling, or physical attack, for example. Stigma can be based on identity or illness. In some cases, potentially stigmatizing identities and illnesses intersect (e.g., in the case of HIV/AIDS).

Stigmatizing communication is observable. Thompson and Siebold (1978) identified non-verbal displays of tension and rejection to individuals wearing "gay liberation" buttons. For providers, stigmatizing communication includes shortening the length of a conversation, avoiding contact, and increasing personal distance (Smith, 2011). If providers are engaging in stigmatizing communication, it is possible that the quality of care decreases. Indeed, providing low quality care is one way that health care professionals could communicate stigma.

Secrecy is one way for members of stigmatized groups to cope with anticipated stigma. However, secrecy combined with anticipated stigmatizing communication increases stress levels (Smith, 2011). In the context of provider-patient communication, patients worry about the confidentiality of their identity and illness statuses, which increases stress levels even more. Furthermore, people who belong to a stigmatized group are more likely than people who do not belong to a stigmatized group to "develop a heightened sensitivity to behaviors that may indicate the presence of prejudice or discrimination" (Rintamaki et al., 2007, p. 957). This could be the result of experiences of stigmatizing communication, expectations for interactions, or knowledge that stigmatizing communication is a possibility in a health care interaction.

To reduce stigma, researchers have recommended communication-focused stigma-reduction campaigns (Corrigan & Penn, 1999; Smith, 2011). These campaigns include protesting stigmatizing communication, education campaigns to provide facts and increased understanding about stigmatized groups, and contact interventions to encourage people from stigmatized (e.g., LGB individuals) and non-stigmatized groups (e.g., heterosexual physicians) to interact. In the context of reducing psychiatric stigma, Corrigan and Penn (1999) found that protest campaigns promoted change on an institutional level while education campaigns and contact interventions promoted change mainly on an interpersonal level. Education campaigns and contact interventions have produced mixed results (Corrigan & Penn, 1999), and both types place the burden for reducing stigma on already stigmatized groups.

Stigma and disclosure are related processes. Dindia (1998) explicated the relationship between stigma and disclosure in her chapter outlining the dialectics of stigma disclosure. She wrote, "Self-disclosure is contextualized and context affects self-disclosure" (p. 101). In this case, context can be macro, as in the societal context, or micro, as in the interpersonal or patient-provider context. Goffman (1963) asserted that stigma is socially defined. In other words, how society views a given stigma is more important than the stigma itself. For the current project, this means that how society views LGB identities is more important than the LGB identity itself. Whether or not this point of view accurately reflects the experience of LGB individuals, Goffman's assertion helps explain why LGB individuals are strategic about to whom they disclose their sexual minority status. An LGB patient may or may not have internalized disparaging societal attitudes about sexual minority status, but in any case, the patient is aware of the societal attitude, and therefore, perhaps the provider's view, that sexual minority status is

undesirable or otherwise unfavorable. Self-disclosure is contextualized in the individual, the relationship, and society.

Although the context of HIV is different from the context of LGB patient provider communication, some parallels can be observed, and the two bodies of literature can inform one another. Furthermore, HIV provides an additional context for theoretical and practical descriptions and explanations of stigma, disclosure and reactions to disclosure, and health outcomes. That persons living with HIV perceive stigmatizing communication from health professionals and others is well-documented (e.g., Greene et al., 2003; Rintamaki et al., 2007). Researchers know that revealing an HIV positive status to another person is stressful, and experiencing the reactions of others can be traumatic (Greene et al., 2003). Likewise, LGB people perceive stigmatizing communication, and LGB people know that coming out disclosures are stressful. Furthermore, experiencing the reactions of others can be traumatic. In a study of hypothetical HIV disclosures, researchers found that pairing a support-seeking message with the disclosure was more likely to result in inspiring a comforting response than making the disclosure without a support-seeking message (Caughlin et al., 2009). Researchers do not yet know if pairing a coming out disclosure with a support-seeking message would be more likely to inspire a comforting response than making the coming out disclosure without a support-seeking message. However, Caughlin and colleagues' finding does seem to imply that interpersonal communication can preemptively combat perceived stigma from close others. Finally, stigma has consequences for health outcomes. In this case of HIV, individuals with high stigma concerns were found to be more than three times as likely to not adhere to medication instructions than those with low stigma concerns (Rintamaki, Davis, Skripkauskas, Bennett, & Wolf, 2006). While there may be something unique to

the HIV stigma context, this finding implies a correlation between stigma concerns and adherence that should garner the attention of researchers.

## **Disclosure**

In interpersonal communication studies, there is a long tradition of studying, measuring, and modeling disclosure processes. Self-disclosure is "an interaction between at least two individuals where one intends to deliberately divulge something personal to another" (Greene, Derlega, & Mathews, 2006, p. 411). The intentional divulgement can be verbal or nonverbal (e.g. a tattoo of two interlocking feminine symbols to symbolize lesbian identity is a nonverbal message). Disclosure processes are important to relational development, family communication, conflict, health, and a host of other topics.

Greene and colleagues (2006) traced disclosure as an area of study to Jourard's research on openness in relationships in the 1960s and 1970s. In communication studies, scholars locate Altman and Taylor's (1973) work on social penetration as an important starting place for further work on disclosure. Disclosure as a dialectic was coined by Altman, and serves as the foundation for Petronio's (2002) communication privacy management theory.

Researchers have identified seven dimensions of disclosure messages: Transactional, reward value, informativeness, accessibility, truthfulness, social norms, and effectiveness (Greene, Derlega, & Mathews, 2006). Greene and colleagues (2006) claimed, "These dimensions of disclosure messages embody different lines of theory and research" and that most of their own work has focused on disclosure effectiveness, or individuals' "subjective reasons for disclosure and nondisclosure in the pursuit of goals for oneself, the partner, and the relationship" (p. 412). Disclosure effectiveness is characterized by how well the disclosure accomplishes the goals of the discloser (e.g., the

LGB individual) and the goals of the target of the disclosure (e.g., the healthcare professional). Researchers also know that people vary in terms of how much planning they do before a disclosure (Afifi, McManus, Hutchinson, & Baker, 2007; Donovan-Kicken & Caughlin, 2010; Durham, 2008).

Individuals employ decision-making rules when they are deciding whether or not to disclose (Dindia, 1998). Decision-making rules are one component of communication privacy management theory (Petronio, 2002). In one study, researchers found that participants who had been sexually abused as children employed decision-making rules when deciding whether or not to disclose the abuse (Petronio, Reeder, Hecht, & Mon't Ross-Mendoza, 1996). Importantly, participants chose not to disclose based on rules about target characteristics (e.g., the recipient was perceived as untrustworthy) and rules about anticipated negative reactions (e.g., gossip, loss of control over the information). Findings from that and other studies suggest disclosure is a rule-governed process, and individuals are aware of the rules they employ during a disclosure interaction (Afifi, 2003; Petronio et al., 1996).

In addition to enacting rules, it is clear that individuals often make goal-driven choices about to whom to disclose, when to do it, where to do it, how to do it, and so on (Caughlin & Vangelisti, 2009). More specifically, there are different kinds of goals that people weigh when they are deciding whether or not to disclose. Researchers have theorized about these goals. For instance, Clark and Delia (1979) identified instrumental goals, identity goals, and relational goals as the three categories of goals. Dillard and colleagues (1989) posited a division between primary goals and secondary goals, which Caughlin and colleagues (2009) expanded upon in their investigation of message features and reactions to hypothetical HIV disclosures. The multiple goals perspective further addresses this goal-orientated disclosure cognition and behavior. For instance,

Thompson, Whaley, and Stone (2011) wrote, "A multiple goals perspective is a principled way of identifying message features that are likely to be effective in explaining illness" (p. 301). In the current study, knowing why people choose to conceal or reveal their sexual minority status can be used as a control variable (e.g., do individuals see their LGB status as relevant to their health status or a health concern?), and because knowing peoples' reasons adds richness beyond a dichotomous disclosure variable (i.e., a single yes or no item about disclosure).

Finally, family communication and health outcomes are two areas of research for which disclosure is relevant. In their study on family secrets, Vangelisti and Caughlin (1997) discovered an association between family members' perception of topic intimacy and the likelihood of revealing a secret. Mental and physical health can improve with written disclosures of emotional and traumatic experiences (Pennebaker, 1997).

### **Disclosure and LGB Populations**

Much of what researchers know about disclosure processes and theory applies to LGB populations. LGB individuals have various sexual minority status-related disclosure goals and make goal-oriented, rule-governed decisions in various ways. According to Dindia (1998), "Individuals consciously and intentionally manage the disclosure of homosexuality" (p. 93). This concept is also known as selective disclosure and concealment. Greene and colleagues (2003) wrote, "The reasons for and against self-disclosure reflect the multiple goals that individuals have for what they divulge or do not divulge" (p. 416). The multiple goals perspective is useful in the case of LGB populations because it can help explain what these multiple goals for coming out disclosures are as well as how people achieve the goals, or at least how people think about achieving the goals.

Earlier scholars have expressed more certainty about disclosing a stigmatized identity. Goffman (1963) described the role of self-disclosure in stigmatized identity development in four phases. In the first phase, the individual learns and incorporates society's view of the stigmatized identity (e.g., being gay). In the second phase, the individual realizes that he or she possesses the stigma and realizes the consequences of the possession. In the third phase, the individual learns to "pass" [as heterosexual] or learns to conceal the stigmatized identity. In the fourth and final phase, the individual accepts him or herself, respects him or herself, perceives him or herself as "above passing" (p. 101), and he or she discloses the stigmatized identity.

Goffman's (1963) four-stage model provided a foundation for more contemporary researchers focused on sexual minority status disclosures (i.e., "coming out" disclosures). Dindia (1998) asserted that when it comes to disclosing sexual minority status, "going into and coming out of the closet" is a more apt metaphor than simply "coming out of the closet" (p. 105). This metaphor captures more nuance, and it more closely reflects the lived experiences of LGB people. For instance, an individual could be "out" to her family members and neighbors, but still "in the closet" at her workplace. Furthermore, Dindia claimed that this "going into and coming out of" metaphor would be useful if applied to all realms involving the disclosure of private and risky information about the self (e.g., chronic illness).

### **Disclosure and Patient-Provider Communication**

Provider-patient disclosures are different from disclosures that are predicted by theories like social penetration theory because these disclosures do not usually occur along the generally linear progression of relational development and disclosure. Patients may disclose very intimate information during a first meeting with a provider. However,

some of the theoretical concepts still apply. For example, researchers know that reciprocity is more likely to occur when communicators perceive themselves as similar (Altman & Taylor, 1973). Greene and colleagues (2003) found that HIV-positive people are more likely to disclose to one another than they are to disclose to someone who is not also HIV positive.

Situational-environmental reasons can better explain some disclosure processes in health care contexts. Situational-environmental reasons for disclosure pertain to whether or not the disclosure was requested and the disclosure target's involvement in the topic (Greene, Derlega, & Mathews, 2006). For example, if a patient has questions about the likelihood of contracting a sexually transmitted infection from woman-to-woman oral sex, and her provider asks her if she identifies as lesbian or bisexual, situational-environmental reasons would be central to her (the patient's) decision to reveal or conceal information about sexual minority status. Self-focused reasons for disclosure refer to preserving privacy and fearing rejection. These reasons can interact with goals people have for disclosures. In the context of HIV positive individuals, an important instrumental goal is disclosing the information about the HIV status (Thompson, Whaley, and Stone, 2011). For example, reasons for (non)disclosure and goals interact when an HIV positive individual wants to disclose her status to a provider to receive accurate health care (i.e., meet an instrumental goal), however, she hesitates in disclosing because she fears rejection (i.e., reason for concealing or revealing).

### ***LGB populations***

In the case of patient provider communication, perceived similarity may be low, which makes a sexual minority status disclosure potentially less likely. However, situational-environmental reasons, like a provider directly asking about the gender of a

patient's sexual partners, could make a sexual minority status disclosure more likely. Then again, self-focused reasons could lessen this effect (Greene, Derlega, & Mathews, 2006). Indeed, the purpose of the current study is discovering what factors predict a coming out disclosure in this context.

In a study of bisexual and lesbian women with cancer who made coming out disclosures to a member of their cancer care team, researchers found that 72% of women disclosed their sexual minority status to at least one member of the care team (Boehmer & Case, 2004). These women were extremely likely to have disclosed their sexual minority status to other people as well. Of the women who had not disclosed their sexual minority status, their reasons varied and included a fear of homophobia on the part of the care team, being single, and a belief that sexual orientation is private. Women who chose to disclose reported that they did so because they perceived that it was a safe environment to do so and because they did preparatory work, or screened members of the care team before making the disclosure.

#### **DISCLOSURE DECISION-MAKING MODEL**

In light of existing research on stigma, disclosure, and LGB populations, researchers know the kinds of disclosures that individuals typically make in certain situations, and that some disclosures are situation, or context, dependent. A process-oriented view of disclosure, the view taken for the current project, is valuable because researchers can assess the cognition and communication taking place between individuals or groups of individuals (e.g., all of the members of one's care team during treatment for a serious illness). Process models can describe likely processes including antecedents, and mediating and moderating variables. Disclosure can be positioned as an antecedent or as an outcome variable, depending on which part of the disclosure process the researchers

aims to focus. In studying disclosure as an outcome variable, taking up a dialectical perspective can be useful. Dindia (1998) wrote, "A dialectical perspective on self-disclosure implies that self-disclosure is not a single, dichotomous event in which the person has disclosed or has not disclosed" (p. 87). In the present study, I aim to include disclosure as an outcome variable with levels of sexual minority status disclosure (as opposed to a binary yes/no disclosure variable). In other words, there is a continuum of disclosure in my proposed models. Models have explanatory power while typologies are typically limited to descriptive power. Existing models of disclosure intend to explain how and why the process happens the way it does.

A relevant model is Greene and colleagues' integrated model of health disclosure decision-making (DD-MM; 2009). The DD-MM perspective is a good fit for the current project. According to this model, an individual makes a decision to disclose about illness status, which leads him or her to consider disclosure message strategies (see Appendix B for a visual representation of the DD-MM). After consideration, the disclosure results in disclosure outcomes. Outcomes become potential feedback in terms of that individual's next disclosure decision.

In this model, the process begins with the individual assessing information about a diagnosis. In this case, information includes stigma, preparation, prognosis, symptoms, and relevance to others (Greene, 2009; Greene, Derlega, & Mathews, 2006; Greene, Derlega, Yep, & Petronio, 2003). These five aspects of information can occur in any order, and they may not all be relevant at the same time for an individual considering disclosure. Greene (2009) noted that all disclosures involve risk and vulnerability, and the risk and vulnerability increase with how stigmatized the information is. She continued, "Stigma literature has developed extensively to incorporate health, yet we still know little about the effect on disclosure intentions" (p. 233). The preparation aspect pertains to how

prepared or unprepared an individual is to receive a diagnosis. The prognosis aspect addresses the quality of the illness diagnosis. For example, whether the condition is chronic or acute, or whether the condition is treatable or terminal. Symptoms refer to how the individual experiences the diagnosis or illness. The noticeability of symptoms may influence whether or not an individual discloses the diagnosis to others. Finally, the relevance to others aspect relates to whether or not other people are directly or indirectly affected by an individual's diagnosis.

From the assessment stage, individuals do two things: They assess receivers, and they assess their own disclosure efficacy. Receivers are assessed by perceived relational quality and anticipated response. Disclosure efficacy is characterized by how well or not an individual believes he or she can communicate the message content to another person in order to get desirable results (Bandura, 1977; Greene, 2009). After assessing one's own efficacy, if the individual chooses to disclose, then she or he will go on to enact message strategies (i.e., disclose) or use a third party alternative to make the disclosure. After the disclosure, there will be outcomes, which are not necessarily specified by the DD-MM. The model uses a dashed line to suggest that these outcomes of disclosure will affect future disclosure decisions of the individual.

Something that makes the DD-MM unique from other models of disclosure is the feedback/reassessment loop that moves from outcomes to assessment of information, assessment of receiver, and disclosure efficacy. It is likely that a feedback loop exists in a general sense (Clair, Beatty, & MacLean, 2005). For instance, if an adolescent LGB individual disclosed his or her sexual minority status to a physician and the physician reacted with stigmatizing communication behavior or was unresponsive when the LGB individual was seeking a positive response, then that individual may be more likely to carefully consider future disclosure or altogether less likely to disclose to physicians in

the future. Other models of interpersonal communication (e.g., the transactional model of communication; Barnlund, 1970) also contain feedback loops, but this is not commonly measured, possibly because of the methodological challenges in doing so. One challenge is the difficulty of teasing out the strength of the influence of a disclosure outcome from other communicative events that the individual has since experienced.

The innovativeness of the methodology of the current project involves measuring the impact of the feedback loop. One way researchers could assess a feedback loop would be to ask for retrospective accounts of past disclosures and collect data about the relative importance of these past events to participants. In order to begin testing the presence of a feedback loop in disclosure processes, I will test the prediction that past disclosure experiences influence future hypothetical disclosure.

Propositions about what goes on inside of the model (i.e. inside of the feedback loop) are what drive the DD-MM. Greene and her colleagues constructed eight groups of testable propositions related to the model. To review, the eight proposition groups are about how the following variables operate within the disclosure model: stigma, preparation, prognosis, symptoms, the perceived relevance of a diagnosis to others' health, relational quality, anticipated and actual responses to disclosure, and efficacy. Some of these variables are more relevant than others to the current study. For example, disclosure efficacy is a central issue for the current project because health disparities and stigma affect disclosure efficacy for a LBG person (Durso & Meyer, 2013). The DD-MM is a good starting place for modeling the variables that can predict this disclosure.

My goal in the present investigation is to test competing models, all of which are grounded in literature on interpersonal health communication and LGB health. First, I posit that (a) memorable messages about sexual minority status and receiving health care, (b) past disclosure experiences in health care settings, (c) self-perceived sexual minority

status visibility, and (d) screening behaviors are direct predictors of one's intentions to disclose LGB status to a health professional (e.g., nurse, physician, staff member). Second, I posit that two dimensions of efficacy--disclosure efficacy and target efficacy--mediate the relationships previously predicted, thereby hypothesizing an indirect effect of memorable messages, past disclosures experiences, visibility, and screening on disclosure decisions. The variables that comprise these models are explicated in the following section. Please see Appendix C for figures of models.

## **VARIABLES**

### **Memorable Messages**

Messages are memorable if they are remembered for a long time by the individual who receives them, and if they have an influence on the individual's life. As Knapp, Stohl, and Reardon (1981) wrote, "hundreds" of messages are exchanged interpersonally in a single day, and the number is "staggering" during an entire lifetime. After messages are processed and possibly responded to, many of them are forgotten. Memorable messages are those messages that are not forgotten by the individual. Knapp and colleagues (1981) concluded that memorable messages are almost always serious, and most people remember the exact wording of the message. Over 70% of messages contained prescriptions, and of these, over 40% had to do with how the receiver of the message could improve his or her self-concept. The second most common topic had to do with how to get along with other people. Approximately 90% of participants believed that the memorable message had a positive, long-lasting effect on them. Researchers do not yet know if this is true for sexual minority status individuals who remember messages about gayness, bisexuality, or how to talk about health with providers. Knapp and colleagues (1981) suggested that injunctions, the most common form of memorable

messages, reflect a conventional social code and aim to maintain those conventional, even puritanical, codes. Based on knowledge of existing health disparities and stigma, it is likely that these conventional or puritanical messages are not always perceived as positive messages by sexual minority status receivers. Finally, memorable messages tend to transcend any one specific context. In other words, a memorable message about "never amounting to anything" transcends a specific job context, and so it is generalized beyond the job context to other areas of life (e.g., romance, friendship, school). A variety of events and contexts become associated with the memorable message.

Based on Knapp and colleague's (1981) original article, other researchers have examined the role of memorable messages in various contexts and models. Some researchers have attempted to use control theory as a way to frame a feedback loop between memorable messages and behavior (Smith, Ellis, & Yoo, 2001). Memorable messages appear to be related to values and self-assessments of behavior. In other words, memorable messages can influence how people think about their behavior. Knapp and colleagues (1981) wrote, "Memorable messages are a rich source of information about ourselves, our society, and our ways of communication" (p. 40). Negative memorable messages about being LGB contribute to internalized homophobia and internalized heterosexism (Williamson, 2000). Internalized homophobia and internalized heterosexism refer to directing negative social attitudes toward the self as a result of being a socially stigmatized person. One participant in a study of gay men living in rural areas reported that he experienced shame and guilt as "a result of all of those nasty things said about gay people" (Cody & Welch, 1997, p. 60). Furthermore, internalized homophobia and internalized heterosexism is a factor in initiating and perpetuating self-harm behaviors, disordered eating, depression, and substance abuse (Williamson, 2000). Memorable messages about the "morality of homosexuality" also contribute to

internalized homophobia and internalized heterosexism (Mayfield, 2001). Lesbian and gay people also report positive aspects of their identities like belonging to a community, living authentically and honestly, gaining personal insight and sense of self, involvement in social justice and activism, and, for lesbians, enjoying egalitarian relationships (Riggle, Whitman, Olson, Rostosky, & Strong, 2008). However, it is unclear in Riggle and colleagues' study whether or not individuals experience these positive aspects as effects of memorable messages about lesbian and gay identity.

Memorable messages influence behavior about navigating new situations like college (Nazione et al., 2011), aging (Holladay, 2002) and prevention and detection behaviors related to breast cancer (Smith et al., 2009). About 40% of memorable messages that undergraduates received about college had to do with believing in themselves (20%) or working hard (20%) as message topics (Nazione et al., 2011). Approximately 35% of these messages came from family members. Over 70% of students reported changing at least one behavior as a result of the memorable message. Behavior changes as memorable message effects included studying, increasing one's focus, attending class, asking for help, and learning to live with things as they are. Effects of memorable messages about aging included viewing the aging process more favorably (or negatively), being motivated to take better care of oneself physically, and changing some interpersonal relationships (Holladay, 2002). For example, of memorable messages that led participants to view aging negatively, people reported that the message effects made them believe that "aging is debilitating, incapacitating, and rather depressing" (p. 692). Other participants described messages with positive effects motivating them to "take care of [myself] each and every day with proper exercise, eating habits, no smoking" (p. 693). Although aging and identifying as a sexual minority are qualitatively different, the experiences may be similar in that both are stigmatized in dominant culture

in the United States. That message effects exist for memorable messages about aging lends some evidence to support that memorable messages about sexual minority status and health might also produce meaningful message effects because old age and sexual minority status are both stigmatized identities.

Memorable messages explicitly about health also produce meaningful message effects. Individuals may receive messages about health from the media, friends, family, and medical professionals (Smith et al., 2009). Although Smith and colleagues did not report the sexual orientation of participants in their study, we can assume that LGB individuals receive messages about health from each of these sources, too. Smith and her colleagues (2009) found that the topic of the message and the source of the message both affected how memorable the message was, and topic and source affected breast cancer detection and prevention behavior. Of course, it is possible that the impact of these messages is different for LGB people. Out of all of the sources reported in Smith's (2009) study, messages from medical professionals were the least memorable, but also the most impactful when they were remembered. This speaks to the powerful influence of health professionals on health behaviors. There is evidence that messages from interpersonal sources have a stronger effect on health behavior than messages from the media (Dutta-Bergman, 2004). Messages from health professionals and other communication partners of LGB individuals can have a large effect on health behavior, including decision making about whether or not to come out to a physician.

One may study memorable messages by assessing the quantity of memorable messages, the content or topic of memorable messages, the source of memorable messages, the valence of memorable messages, and the relative importance of individual memorable messages (Holladay, 2002; Nazione et al., 2011; Smith et al., 2009). In the present investigation, I will solicit memorable messages from participants about

healthcare and sexual orientation and examine the valence of the messages. Memorable message effects may directly influence the decision to disclose one's sexual minority status to a health professional, or memorable message effects may indirectly influence the disclosure decision through disclosure efficacy and target efficacy. Therefore:

*H1a: The more positively valenced the memorable message, the more likely it is that the participant will disclose.*

*H1b: The more influential the memorable message, the more likely it is that the participant will disclose.*

*RQ1: What is the content of participants' memorable messages about sexual orientation and receiving health care?*

### **Past Experiences**

Past experiences and behaviors, to some extent, can predict future experiences and behaviors. Theories of social cognition and social learning can help explain the feedback loop that exists in the transactional model (Barnlund, 1970) and in the DD-MM (Greene, 2009). Social cognition and social learning are primarily interested in the relationships between cognition and behavior over time. Only some cognitions predict behavior, and situational factors and individual differences can mediate these relationships (Fiske & Taylor, 1984). In other words, it is difficult to tease out any kind of one-to-one relationship between cognition and behavior, especially in contexts that are complicated by identity, goals, health, and interpersonal communication. Importantly, longitudinal health-related studies have shown a strong positive relationship between reported intention to perform a behavior and the report of that behavior (e.g., Buller et al., 2000). Social learning theory takes the entire social context into account and focuses on observation, modeling, rewards, and punishments (Bandura, 1976; Bandura, 1985).

Researchers have used social learning theory to explain differences in human sexuality. For example, Hogben and Byrne (1998) described peer education programs that led to tangible health outcomes like increased reported condom use and safer intravenous drug use. The focus of the current study is identifying predictors of disclosure rather than necessarily changing health behavior on the part of the LGB individual, however, it is noteworthy that social learning theory is valuable in linking information and self-efficacy in at-risk individuals.

Disclosure research and literature has also addressed the effect of the past on the present and future. While social cognition theory and social learning research tends to focus more on cognitive processes, some disclosure research has focused on the effect of past communication behaviors (e.g., sharing private information) on future communication behaviors (e.g., continuing to share private information with other interaction partners). For example, when individuals are considering revealing personal information, it is likely that they consider the potential target's responses to previous disclosures (Afifi & Caughlin, 2006). In a longitudinal study of family secrets, researchers found that if an individual expected a negative, or punishing, response, he or she was more likely to conceal information (Afifi & Steuber, 2009). Although individuals' perceptions of the likelihood of rewarding or punishing responses from a disclosure recipient (a health provider, in the case of the current study) are distinguishable from actual reactions, evidence suggests that these perceptions are just as influential, if not more so, than actual responses (Kelly, 2002).

For the current project, this means that it is likely that the more rewarding (and less punishing) individuals have found disclosing their LGB status in the past, the more likely they are to disclose their LGB status subsequently. It is also important to account for the possible mediating effect of efficacy, given previous studies in which efficacy has

been shown to mediate statistical relationships illustrating the effect of the past on the future. Therefore:

*H2a: The more positively valenced the past disclosure experience, the more likely it is that the participant will disclose.*

*H2b: The more significant the past disclosure experience, the more likely it is that the participant will disclose.*

*RQ2: What is the content of participants' descriptions of past disclosure experiences?*

### **Perceived Visibility**

To examine the role of visibility in relation to stigma and disclosure, it is important to revisit Goffman's (1963) work on discredited and discreditable statuses. According to this work, discredited individuals possess a visible minority status (e.g., using a wheelchair) and discreditable individuals possess an invisible minority status. To Goffman (1963) and Dindia (1998), having an unknown LGB identity qualifies as an invisible (or "passing") discreditable status. Dindia (1998) wrote, "The discreditable is one whose stigma is not known about nor immediately apparent to others, such as being homosexual" (p. 84). Braithwaite (1991) asserted that Goffman makes an oversimplification about challenges that the discredited face in her work on stigma and persons with disabilities. Similarly, I assert that oversimplifications exist about the veracity of claims made about "being homosexual" (Dindia, 1998, p. 84) and discreditable identities. Smith's (2007) work provides support for the evidence of this oversimplification in her more recent discussion of stigma. She wrote, "Stigma encompasses marks, both seen and unseen" (p. 464). In other words, LGB individuals

may be discredited or discreditable, depending on their own visibility. LGB status can be visible, and therefore, a discredited status.

Self-perceived sexual minority status visibility is a matter of how likely or unlikely an individual believes it is that a relative stranger (i.e., a health professional) could know his or her LGB status just by looking at that him or her. Greene and colleagues wrote, "Nonverbal messages such as the clothes we wear as well as what we say may be examples of self-disclosure if the goal is to reveal something personal about ourselves that the other person did not know" (p. 411). Smith (2011) described the "nonverbal messages" that Greene noted as "marks." Visibility is an important predictor variable because it affects what the patient and physician assume they already know about one another. An individual may be enacting certain markers that a provider may or may not be aware of as signs of LGB status. In existing literature, LGB status is often conceptualized as an invisible trait or as an invisible identity (e.g., Dindia, 1998). What seems more likely is that this is true for some, but not all, individuals. In other words, some LGB individuals may perceive their LGB identity as visible, invisible, or on a scale of visibility on a day-to-day basis. Because the current study is primarily about a hypothetical present or near future disclosure to a health professional, there is less focus on visibility mutability or visibility management and more focus on a stable, if temporary, self-perception of visibility. Next, some examples of how an LGB individual may make his or her status more visible are offered.

To some extent, LGB visibility is dependent upon the observer's knowledge of these cues or markers. Perhaps one of the most commonly known markers to LGBs and non-LGBs alike is the rainbow symbol. In a study of LGB adolescents, Lasser and Tharinger (2003) wrote, "Participants monitor and modify dress, speech, and body language to manage their visibility. They use subculture symbols, euphemisms, humour,

and references to pop culture..." (p. 237-238). The rainbow is one example of a subcultural symbol. Researchers assert that visibility management is important and central to the developmental processes of LGB youth. Cues and markers are not always as subtle as a reference to popular culture. For instance, one gay man had "HIV+" tattooed on his bicep as a way to disclose his status to potential male sex partners (Greene, Derlega, & Mathews, 2006). While his tattoo does not communicate his sexual minority status, that tattoo in the context of a gay club might indicate both statuses to other men in the club.

As LGB people age, visibility management may become limited to certain social contexts, becoming more about the perception of how others perceive them and less about identity formation (as in the case of adolescent and young adults LGBs). As adult LGB individuals, people still engage in environmental assessments when making decisions about visibility. Environmental assessments are made by gathering information and observing how other people in a particular place orient themselves toward sexual minority status related issues (e.g., gay marriage, pride parades, television shows depicting gay characters). In adolescence, there is a dynamic relationship between environmental assessments, identity, and visibility management because the environment tends to be internalized (Lasser & Tharinger, 2003). That dynamic relationship and internalization does not exist as strongly in adulthood. In a study of adult gay and bisexual males from 1997, gay visibility was negatively associated with positive self-perception, and it was positively associated with positive gay identity (Frale, Wortman, & Joseph). Although this study is over fifteen years old, the statistical and practical strength of the results indicate that visibility is important. The authors cited the gay rights movements of the late 1980s and early 1990s as encouraging gay men and lesbians to become more visible with the goal of improving their own mental health. However, in

Frable and colleagues' study, the "total effect of visibility on positive self-perceptions is negative" (p. 618). Participants in the study with the lowest levels of self-perceived visibility had the highest levels of self-esteem and well being, and they had the lowest distress levels. These results are difficult to interpret, and similar issues exist in the 21st century. Researchers still do not have solid answers about visibility and mental health outcomes. Current conversations about coming out echo similar concerns.

Since the aforementioned gay rights movements of the late 1980s and early 1990s, community leaders have continued to convey blanket statements about the inherent value of coming out and becoming and remaining visibly so. However, this message has been tempered by other voices expressing concerns about the physical safety of queer bodies across space and place. These voices have contributed to an increased sensitivity about for whom and when coming out is safe. There is some evidence to suggest that social support mediates the relationship between self-disclosure and well being (Greene, Derlega, & Mathews, 2006). For adolescents living with their family of origin, coming out can mean homelessness. LGB adolescents and young adults make up anywhere from 15% to 36% of homeless youth (Van Leeuwen, Boyle, Salomonsen-Sautel, Baker, Garcia et al., 2006) even though they comprise less than 4% of the total youth population in the United States (Savin-Williams & Ream, 2007). Over time, conversations about campaigning for increased visibility have become more nuanced. Now, some activists and identity theorists relay that coming out and being visible is not always an attainable ideal because of issues of physical safety, homelessness, and to a lesser degree, mental health outcomes like self-esteem, well being, and distress levels.

In a proposed model of invisible identities in the workplace, researchers established visibility as a dimension of stigma (Clair, Beatty, & MacLean, 2005). In other words, LGB individuals may avoid stigma by remaining invisible. For them, antecedents

of a disclosure are contained in two categories: Contextual (environmental) and individual factors (individual differences and motives). The feedback loop in their model is supported by social cognition theories (e.g., Fiske & Taylor, 1984). For example, a positive coming out experience at work will lead to a higher likelihood of subsequent coming out events. In a physician's office, it is also possible that environmental factors play a role in disclosure, however, the individual factors are much more focused on interpersonal communication, which is the main purpose of the current study.

In summary, there are many markers that LGB individuals may rely on to communicate their otherwise invisible trait or invisible status to others in the know. The number of visual markers an individual can include while wearing a gown in a physician's exam room is limited. Self-perception of sexual minority status visibility may make an individual more or less likely to disclose his or her status to a health professional. It could be that the more visible one perceives his or her status to be, the less likely he or she is to disclose to the health professional because he or she believes the identity is already visible, or obvious, to the health professional. However, the reverse might be true. It could be that the more visible one perceives his or her status to be, the more likely he or she is to disclose to the health professional because he or she believes that there is little risk in making the verbal disclosure since the disclosure has already been made nonverbally by the markers. If an individual believes his or her status is invisible, or without markers, than it may make him or her more or less likely to disclose depending on the reasons for the visit and his or her other goals. Because there is little research on the possible relationship between perceived visibility and disclosure processes, a research question is more appropriate than a hypothesis:

*RQ3: How does perceived visibility of sexual minority status affect disclosure likelihood?*

## **Screening**

Cues or signals about providers intentionally gathered by the LGB individual describe the screening process. One way for an individual to screen is to stage information or "test the waters" before making a potentially stigmatizing disclosure. Individuals might stage information during the interaction to assess target efficacy. In the present study, screening refers to the information that an individual gathers before entering a care facility in which provider-patient interpersonal communication would take place.

Because there is some evidence to suggest that individuals need to be able to anticipate a positive or satisfying response before making a disclosure (Altman & Taylor, 1973), the potential discloser's perception of cues or signals that the disclosure will be well received are important to consider. These cues or signals may occur during the interaction, as analyzed in a study about disclosing sexual abuse (Petronio, Reeder, Hecht, & Mon't Ros-Mendoza, 1996). For example, children and adolescents in this study reported making an incremental disclosure (as opposed to the full disclosure of abuse), and using the other person's reaction to make a decision about whether to make another, more revealing incremental disclosure. In the current study, this could mean that a gay patient mentions a gay friend or gay celebrity, and then assesses the provider's reaction to judge whether or not it would be safe for him to disclose his own sexual minority status. These cues or signals may also occur before the interaction takes place. Women with breast cancer who reported disclosing their sexual minority status to at least one member of their care team did so because they perceived that the environment was safe and because they had done preparatory screening work such as asking their lesbian friends for provider recommendations (Boehmer & Case, 2004). These women reported that the best-case scenario was having a lesbian as part of the care team, however, simply

knowing that the institution employed lesbian providers somewhere in the organization and knowing that heterosexual providers had previously reacted positively to other sexual minority patients was attractive to these patients.

As evidenced by recent research, LGBT individuals are more likely to engage in online information seeking about health compared with their heterosexual counterparts (Mitchell, Ybarra, Korchmaros, & Kosciw, 2014). Online information seeking is one way to engage in screening. For LGB people, online screening is a process that allows them to avoid disclosing their sexual minority status to another person because the screening behavior could primarily consist of reading information on health care facilities' websites and consumer review sites like Yelp. In fact, screening providers and care facilities by asking other people in face to face or mediated contexts may result in a double disclosure. In other words, the LGB individual would not only be obligated to disclose his or her sexual minority status, but also that he or she is experiencing illness or is otherwise in need of a health care provider. Conducting an online screening process allows the LGB individual to avoid a potentially stressful double disclosure. On the other hand, this anonymous screening process may mean less useful or less tailored information about LGB-friendly clinics and health providers. In one investigation of over 5,500 adolescents, of which 25% identified as sexual minorities, 19% of heterosexuals searched for sexual health information online compared to nearly 80% of gay, lesbian, and queer individuals (Mitchell, Ybarra, Korchmaros, & Kosciw, 2014). LGB adolescents may want to preserve their privacy, and they may not have many alternatives for finding relevant sexual health information. Older adults have also expressed interest in online health information seeking and websites specifically geared towards their age group and particular health concerns. For example, 84% of gay men in one study claimed they would welcome a website in which they could interact with each other and health

professionals to get their health-related questions answered (Bolding, Davis, Sherr, Hart, & Elford, 2004).

Not all online health information seeking is communicative, however, some of it is. When engaging in online health information seeking, an individual may passively read content produced by health professionals, journalists, bloggers, and others who are virtually strangers and with whom the information seeker has no interaction. Online health information seeking can also take the form of a message board in which posters can interact asynchronously. Real-time text, audio, or video chats are synchronous options for online health information seeking that likely require a disclosure of identity or health needs. An LGB individual may interact with another LGB person, an ally, a health professional, or any other informed individual to gather information about gay-friendly physicians in his or her area. Searching for sexual health information, especially information about HIV/AIDS, appears to be the most commonly reported online information seeking behavior of LGBT people in the under 24 years of age range (e.g., Magee, Bigelow, DeHaan, & Mustanski, 2011). Because existing research on the link between screening behaviors and disclosure processes is inconclusive, a research question is more appropriate than a hypothesis for assessing this possible relationship:

*RQ4: How do screening behaviors affect disclosure likelihood?*

### **Efficacy**

LGB individuals face structural barriers when it comes to accessing and receiving health care (Mollon, 2012). However, these individuals do have some agency. Self-efficacy is one important mechanism of agency. Bandura (1993) defined self-efficacy as "People's beliefs about their capabilities to exercise control over their own level of functioning and over events that affect their lives. Efficacy beliefs influence how people

feel, think, motivate themselves, and behave" (p. 118). Efficacy beliefs can be influenced by interpersonal communication and vice versa. Self-efficacy is a variable that is often included in interpersonal health communication studies because it can be an important predictor, mediator, or outcome variable.

### **Self-Efficacy, Disclosure Efficacy, and Health**

Important relationships exist between self-efficacy and health. In a meta-analysis, O'Leary (1985) reported that self-efficacy mediated the effectiveness of interventions in a wide range of health behaviors and topics. These topics included quitting smoking and relapse rates, pain and pain management, weight and food control, myocardial infarction recovery, and adherence to preventive health programs. In general, the higher one's perceived self-efficacy is, the greater the likelihood of success in any number of health challenges.

Low disclosure-related self-efficacy, also called disclosure efficacy, can have disastrous results for individuals and their social networks. In Kalichman and Nachimson's (1999) study of disclosure efficacy and disclosing an HIV positive status to a sexual partner, 22% of men and 21% of women in the sample had not disclosed their status to their most recent sex partner. Participants responded to items after reading a scenario about a potential sexual encounter. Men and women in the sample who had not disclosed their status to their most recent partner reported significantly greater levels of emotional distress in their responses to the scenario compared to individuals who had disclosed their status to their most recent partner. Furthermore, individuals who had not recently disclosed their HIV status had the lowest reported levels of disclosure efficacy. Although this is a not provider-patient health context, it does demonstrate the severity of the potential consequences that can accompany concealing an important fact about one's

health status to another person. It also demonstrates the potential importance of disclosure efficacy as a mediating variable when an individual is considering making a risky disclosure. Drawing from existing research, I pose the following hypotheses and research questions:

*H3a: The relationship between memorable messages and disclosure likelihood predicted in H1a is mediated by disclosure efficacy. The more positive the message is, the higher disclosure efficacy will be, and the more likely it is that the participant will disclose.*

*H3b: The relationship between memorable messages and disclosure likelihood predicted in H1b is mediated by disclosure efficacy. The more influential the memorable message, the higher disclosure efficacy will be, and the more likely it is that the participant will disclose.*

*H4a: The relationship between past disclosure experience and disclosure likelihood predicted in H2a is mediated by disclosure efficacy. The more positive the past disclosure, the higher disclosure efficacy will be, and the more likely it is that the participant will disclose again.*

*H4b: The relationship between past disclosure experience and disclosure likelihood predicted in H2b is mediated by disclosure efficacy. The more significant the past disclosure experience, the higher disclosure efficacy will be, and the more likely it is that the participant will disclose again.*

*RQ5a: Does disclosure efficacy mediate the relationship between perceived visibility of sexual minority status and disclosure likelihood?*

*RQ5b: Does disclosure efficacy mediate the relationship between screening behaviors and disclosure likelihood?*

## **Target Efficacy**

In the context of the current study, target efficacy refers to the LGB individual's perception of a healthcare professional's ability to non-judgmentally respond to the coming out disclosure. Greene and colleagues (2003) wrote, "The response is critical in understanding the disclosure process" (p. 417). Other researchers agree. Dindia (1998) explicated, "Target characteristics and anticipated reaction of target are the primary factors determining to whom stigma is disclosed" (p. 93). Responding non-judgmentally, or the style of the response, is just one characteristic of a response that would be satisfying for the discloser. Responsiveness also involves the content of the response and the timing of the response (Greene, Derlega, & Mathews, 2006). Dindia (1998) drew from communication privacy management theory and relational dialectics in her discussion of coming out as an ongoing process rather than a singular event. In this ongoing process, individuals carefully consider to whom they want to come out, when, where, and why. One study reported that between 31% and 89% of health providers reacted in a stigmatizing way to a patient coming out (Harrison, 1996). Boehmer and Case (2004) found that sexual minority women "wish for providers to acknowledge the disclosure in a positive way and to integrate it into their ongoing dialogue with the patient" (p. 1888).

As suggested by earlier work on disclosure, it may be necessary for individuals to anticipate a positive or satisfying response before they become willing to disclose (Altman & Taylor, 1973). LGB patients have many reasons for carefully considering target efficacy. In one study, 38% of LGB patients avoided questions about sexuality, and 37% of patients actively disclosed their sexual minority status to a care provider (Eliaison & Schope, 2001). Participants in both groups reported that care providers made heterosexist assumptions. For example, lesbians may use clipped condoms as dental

dams, but not for protection against pregnancy as a care provider using heterosexist communication might assume. Perceived heterosexist assumptions are associated with lower perceived target efficacy. In a study of lesbian and bisexual women with breast cancer, researchers found that 28% of women chose not to disclose their sexual minority status to any member of their breast cancer team out of a fear of homophobia on the part of a care provider, being single, or a belief that sexual orientation is private (Boehmer & Case, 2004). One woman described her fear of a homophobic doctor removing more of her body than medically necessary. This is an example of extremely low perceived target efficacy. In his interviews with gay men, Beehler (2001) reported that participants believed that the medical field in general was homophobic, heterosexist, and unwelcoming. Despite this belief, his interviewees also expressed desire for open and honest relationships with their care providers. Common fears of consequences of low target efficacy include feeling and being unsafe, being stigmatized and receiving poorer quality care. Street and his colleagues (2009) proposed a model of direct and indirect pathways from provider-patient communication to health outcomes. If a patient feels known, involved, and motivated by the provider, among other proximal outcomes, intermediate outcomes can include access to care, commitment to treatment, trust in the system, and social support. In terms of physical health outcomes, effective provider-patient communication can lead to survival, less suffering, greater emotional well-being, pain control, and vitality. However, in order to fully reap these positive health outcomes, a LGB individual first must be willing to disclose, and that decision may partially depend on how much faith the individual has in the provider to non-judgmentally receive the coming out disclosure. Based on existing target efficacy research, I pose the following hypotheses and research questions:

*H5a: The relationship between memorable messages and disclosure likelihood predicted in H1a is mediated by target efficacy. The more positive the memorable message, the higher target efficacy will be, and the more likely it is that the participant will disclose.*

*H5b: The relationship between memorable messages and disclosure likelihood predicted in H1b is mediated by target efficacy. The more influential the memorable message, the higher target efficacy will be, and the more likely it is that the participant will disclose.*

*H6a: The relationship between past disclosure experience and disclosure likelihood predicted in H2a is mediated by target efficacy. The more positive the past disclosure, the higher target efficacy will be, and the more likely it is that the participant will disclose again.*

*H6b: The relationship between past disclosure experience and disclosure likelihood predicted in H2b is mediated by target efficacy. The more significant the past disclosure, the higher target efficacy will be, and the more likely it is that the participant will disclose again.*

*RQ6a: Does target efficacy mediate the relationship between perceived visibility of sexual minority status and disclosure likelihood?*

*RQ6b: Does target efficacy mediate the relationship between screening behaviors and disclosure likelihood?*

### **The Role of Disclosure Efficacy and Target Efficacy in the Proposed Models**

It is possible that disclosure efficacy and target efficacy mediate the proposed relationships between memorable messages, past experiences, visibility, screening, and likelihood of a hypothetical disclosure of sexual minority status, respectively. For

example, the content and salience of memorable messages may have a positive or negative effect on disclosure efficacy and target efficacy, which could affect the propensity to disclose. On the other hand, memorable messages may simply directly affect the propensity to disclose. In this case, efficacy would not act as a mediating variable. Perceived visibility may also indirectly affect, through efficacy, the likelihood of disclosure. On the other hand, perceived visibility may directly affect an individual's likelihood of disclosure. Past experiences with coming out disclosures and individual differences like self-esteem may also directly or indirectly, through efficacy, affect the likelihood of disclosure. Indeed, the competing models are nested because of the inclusion of target efficacy and target efficacy as mediating variables.

### **The Disclosure Decision**

Ultimately, the models hypothesize the strength of the effects of memorable messages, past experiences, perceived visibility, screening, and efficacy on the decision of LGB individuals to come out as a sexual minority to a healthcare provider. Disclosing one's status is risky because of existing health disparities and stigmas. Not disclosing one's status is risky because it may be detrimental to one's physical and mental health. Knowing the strength and influence of antecedent variables and direct and indirect relationships between variables can illuminate the interpersonal health communication issues that are central to this important context. Importantly, disclosure likelihood can be conceptualized as a continuum, and as a communication event that can happen again and again over time.

In summary, the current investigation explores whether and how the aforementioned variables affect future disclosure decisions. Below is a review of hypotheses and research questions (Appendix C contains all figures):

- H1a: The more positively valenced the memorable message, the more likely it is that the participant will disclose.*
- H1b: The more influential the memorable message, the more likely it is that the participant will disclose.*
- RQ1: What is the content of participants' memorable messages about sexual orientation and receiving health care?*
- H2a: The more positively valenced the past disclosure experience, the more likely it is that the participant will disclose.*
- H2b: The more significant the past disclosure experience, the more likely it is that the participant will disclose.*
- RQ2: What is the content of participants' descriptions of past disclosure experiences?*
- RQ3: How does perceived visibility of sexual minority status affect disclosure likelihood?*
- RQ4: How do screening behaviors affect disclosure likelihood?*
- H3a: The relationship between memorable messages and disclosure likelihood predicted in H1a is mediated by disclosure efficacy. The more positive the message is, the higher disclosure efficacy will be, and the more likely it is that the participant will disclose.*
- H3b: The relationship between memorable messages and disclosure likelihood predicted in H1b is mediated by disclosure efficacy. The more influential the memorable message, the higher disclosure efficacy will be, and the more likely it is that the participant will disclose.*
- H4a: The relationship between past disclosure experience and disclosure likelihood predicted in H2a is mediated by disclosure efficacy. The more*

*positive the past disclosure, the higher disclosure efficacy will be, and the more likely it is that the participant will disclose again.*

*H4b: The relationship between past disclosure experience and disclosure likelihood predicted in H2b is mediated by disclosure efficacy. The more significant the past disclosure experience, the higher disclosure efficacy will be, and the more likely it is that the participant will disclose again.*

*RQ5a: Does disclosure efficacy mediate the relationship between perceived visibility of sexual minority status and disclosure likelihood?*

*RQ5b: Does disclosure efficacy mediate the relationship between screening behaviors and disclosure likelihood?*

*H5a: The relationship between memorable messages and disclosure likelihood predicted in H1a is mediated by target efficacy. The more positive the memorable message, the higher target efficacy will be, and the more likely it is that the participant will disclose.*

*H5b: The relationship between memorable messages and disclosure likelihood predicted in H1b is mediated by target efficacy. The more influential the memorable message, the higher target efficacy will be, and the more likely it is that the participant will disclose.*

*H6a: The relationship between past disclosure experience and disclosure likelihood predicted in H2a is mediated by target efficacy. The more positive the past disclosure, the higher target efficacy will be, and the more likely it is that the participant will disclose again.*

*H6b: The relationship between past disclosure experience and disclosure likelihood predicted in H2b is mediated by target efficacy. The more*

*significant the past disclosure, the higher target efficacy will be, and the more likely it is that the participant will disclose again.*

*RQ6a: Does target efficacy mediate the relationship between perceived visibility of sexual minority status and disclosure likelihood?*

*RQ6b: Does target efficacy mediate the relationship between screening behaviors and disclosure likelihood?*

## Chapter 2: Method

In order to investigate the impact of memorable messages, past experiences, screening behaviors, perceived visibility, and efficacy (disclosure and target) on likelihood of disclosure, web-based survey data were collected on these variables from participants who identified as lesbian, gay, or bisexual (LGB). See Appendix D for a complete copy of the online questionnaire.

### SAMPLE

The sample consisted of 209 participants (121 women, 76 men, 12 identifying otherwise) who were recruited from across the United States after receiving IRB approval to conduct the study (see Appendix E for copies of IRB documents). Participation required living in the United States, being at least 18 years old, being able to read English, and having access to the internet. Employing the snowball sampling technique, the study link was posted online (e.g., social media, university listservs) and offline (e.g., flyers around Austin, TX). Participants reported living across the United States, and 26% reported living in the Austin, TX area. Demographic information is summarized in Table 1. The average age of participants was 29.60 ( $SD = 9.09$ , *Range*: 19-67). Participants identified as lesbian (33%), gay (33%), bisexual (25%), queer (18%), and other (e.g., pansexual, heteroflexible, 4%). Participants largely identified as White/Caucasian (73%), followed by Hispanic, Chicano/a, Latino/a (6%), Black/African American (5%), Asian (4%), Multiracial (8%), and other (e.g., First Nations, 1%). Sums for sexual orientation identity and racial/ethnic identity sum to numbers other than 100% because participants could choose more than one category for each question, and some participants skipped demographic items. On average, participants reported being out to 85.91% of friends ( $SD$

= 22.67), 68.64% of family members ( $SD = 33.07$ ), and 62.91% of coworkers ( $SD = 35.74$ ).

Table 1: Participant Demographics

| Demographic                      | Percentage of Sample | M ( <i>SD</i> ) |
|----------------------------------|----------------------|-----------------|
| 1. Age                           | --                   | 29.60 (9.09)    |
| 2. Gender                        | --                   | --              |
| Women                            | 58%                  | --              |
| Men                              | 36%                  | --              |
| Other (e.g., genderqueer)        | < 1%                 | --              |
| 3. Sexual Orientation            | --                   | --              |
| Lesbian                          | 33%                  | --              |
| Gay                              | 33%                  | --              |
| Bisexual                         | 25%                  | --              |
| Queer                            | 18%                  | --              |
| Other (e.g., pansexual)          | 4%                   | --              |
| 4. Race                          | --                   | --              |
| White/Caucasion                  | 73%                  | --              |
| Hispanic, Chicano/a,<br>Latino/a | 6%                   | --              |
| Black/African American           | 5%                   | --              |
| Asian                            | 4%                   | --              |
| Multiracial                      | 8%                   | --              |
| Other (e.g., First Nations)      | < 1%                 | --              |
| 5. Outness                       | --                   | --              |
| Friends                          | --                   | 85.91% (22.67%) |
| Family members                   | --                   | 68.64% (33.07%) |
| Coworkers                        | --                   | 62.91% (35.74%) |

*Note:* Sums differ from 100% because participants could choose more than one identity category for each question, and some participants skipped demographic items.

## PROCEDURE

Participants completed the web-based survey, created using Qualtrics, after receiving the link from an online source or a flyer. The only forced response item was the consent form Web page. Individuals were required to answer, "I agree" before clicking through to the remaining Web pages with survey content. At the end of the survey,

demographic information was collected. Names were not linked to survey responses. After participants clicked to submit their surveys, the data were stored securely for analysis. Participants had the option to be directed to a separate survey where they could provide their contact information to be entered into a drawing for a \$50 Visa gift card. One \$50 Visa gift card was randomly drawn for every 50 individuals who entered the drawing.

## **DESIGN**

Originally, two competing models were proposed. The first originally proposed model included four predictor variables and one outcome variable. The second originally proposed model included these variables in addition to two mediating variables. I proposed and collected data from at least 200 participants, following guidelines for sample size in structural equation modeling (Bentler & Chou, 1987; Kenny, 2014). However, due to unanticipated issues with various subsample sizes associated the skip logic embedded in the survey, I modified my plan to include four separate models: 1) memorable messages model, which included no mediating variables; 2) mediated memorable messages model; 3) past disclosures model, which included no mediating variables; 4) mediated past disclosures model (i.e., hypotheses regarding memorable messages and past disclosure experiences were separated from each other). See Appendix C for figures of originally proposed and for figures of the modified, tested models. Only 68 participants completed the memorable messages *and* past disclosures sections, so those variables were divided into separate models. This allowed for greater subsample sizes for each model, which contributed to the overall power of each model. Data collection is ongoing to allow for possible follow up tests.

Finally, some qualitative data were collected from participants about their memorable messages and past disclosure experiences. Qualitative data were collected for three reasons. First, the topic of LGB health disparities and disclosure processes in patient-provider contexts is a relatively understudied area of interpersonal health communication, and knowing more about the content of participants' experiences can help researchers design future studies. Second, this approach mirrored that of relevant previous research in the areas of memorable messages (Smith et al., 2009) and processes of concealing and revealing (Afifi & Caughlin, 2006). Third, these qualitative data provided depth and complexity beyond the interpretation of the results of the predictive models.

## **MEASURES**

### **Memorable Messages**

Following Smith and colleagues (2009), participants were provided with a short definition of memorable messages ("Memorable messages are things people said to you that 1) you remember and 2) that have had an influence on your life") and then asked if they could recall any about going to the doctor and their sexual orientation. Smith and colleagues (2009) were interested in memorable messages about breast cancer. Using a measure similar to the one described here (substituting the current variables of interest for breast cancer), they were able to gather data on message topics, sources of messages, and the relationship of these two variables to an outcome variable regarding breast cancer prevention and detection behaviors (i.e., a theoretical feedback loop). Participants who could not recall a memorable message for the current study were directed to an alternative set of questions regarding messages they would give to a LGB peer about going to the doctor and sexual orientation.

For the current project, participants who answered in the affirmative (48%) when asked if they recalled any memorable messages were directed to a series of open-ended and close-ended questions about these memorable messages (see Appendix D for more information on materials). Open-ended memorable message data were obtained by asking participants to provide the message itself, and who or what was the source of the message. Single-item quantitative questions about memorable messages included the age at which the participant received the message ( $M = 19.84$ ,  $SD = 5.40$ ); the valence, or how the message made them feel (1 = *unhappy face* to 5 = *happy face*); and the degree of influence the message had on the way they have talked with health care providers since receiving the message (0 = *no influence at all* to 100 = *very influential*). Higher scores on the valence ( $M = 2.28$ ,  $SD = 1.02$ , *Range: 1-5*) and influence ( $M = 49.33$ ,  $SD = 28.96$ , *Range: 0-100*) measures indicated greater positivity and greater influence, respectively. A summary of means and standard deviations for each variable can be found in Table 2.

Table 2: Variable Means and Standard Deviations

| Variable                        | <i>M (SD)</i> | $\alpha$ |
|---------------------------------|---------------|----------|
| 1. Memorable Message Positivity | 2.28 (1.02)   | —        |
| 2. Memorable Message Influence  | 49.33 (28.96) | —        |
| 3. Past Disclosure Positivity   | 5.26 (1.66)   | —        |
| 4. Past Disclosure Significance | 4.07 (1.81)   | —        |
| 5. Self-Perceived Visibility    | 2.38 (.76)    | .70      |
| 6. Screening                    | 2.06 (.89)    | .88      |
| 7. Disclosure Efficacy          | 5.63 (1.76)   | .96      |
| 8. Target Efficacy              | 3.34 (.72)    | .96      |
| 9. Disclosure Likelihood        | 72.40 (28.95) | —        |

*Note:* Improved alpha reliabilities are reported here for the Self-Perceived Visibility, Screening, and Target Efficacy Scales. Reliabilities improved after conducting confirmatory factor analyses and editing the scales.

Qualitative data collected about memorable messages were thematically analyzed according to analysis procedures outlined by Saldaña (2009). First, multiple descriptive and process codes were assigned to each memorable message description (e.g., sexually transmitted infections). Topical, descriptive codes were meant to summarize and condense the data (Saldaña, 2009). Process codes were similar to descriptive codes, except that they captured actions rather than topics. Process codes for memorable message data included "looking for a provider" and "coming out." Themes emerged as an outcome of the coding and analytic reflection processes.

## **Past Disclosure Experiences**

This variable captured past experiences of revealing sexual minority status, or making a "coming out" disclosure, to a health care provider. This measure was adapted from studies regarding coming out disclosures in the workplace (Griffith and Hebl, 2002), assault survival disclosures to clinicians and other professionals (Ahrens, 2006), and secrets in personal relationships (Afifi & Caughlin, 2006; Caughlin, Afifi, Carpenter-Theune, & Miller, 2005).

Approaches of these other studies were reflected in elements of this newly created measure. For example, Griffith and Hebl (2002) created a measure to capture "coworkers' reactions" in their study of coming out disclosures in the workplace. The items "assessed the extent to which coworkers (superordinates, peers, subordinates) treated gay and lesbian workers fairly and were inclusive, felt comfortable with, and were accepting of gay and lesbian workers" (p. 1194). Griffith and Hebl's (2002) measure is different from the one necessary for the current study, because for their measure, participants were not reporting on an actual past coming out disclosure. Still, it is useful to know that the new measure created for this study was informed by similar measures that demonstrated good reliability (Cronbach's alpha = .89). Ahrens (2006) interviewed rape survivors about the real disclosures that they had made about their assault experiences. Although working within a different health and social context, Ahrens used a qualitative narrative methodology to establish a relationship between past disclosure experiences and future disclosure behaviors. The measures used here were adapted from studies regarding secrets in personal relationships (Afifi & Caughlin, 2006; Caughlin, Afifi, Carpenter-Theune, & Miller, 2005).

Participants were provided with a short definition of past disclosure experiences ("a past disclosure experience is defined as a time that you chose to tell a health care

provider about your LGB status") and then asked if they had any to report. If participants reported not having a past disclosure experience, they were directed to the next section of the questionnaire. Participants who answered in the affirmative (40%) were asked to report on their most recent disclosure experience. Next, participants described their experience in a text box and responded to an item about to whom they disclosed. Participants disclosed to physicians (53%), nurses (23%), on a medical or intake form (17%), to a receptionist or front office staff members (4%), or to some other health care professional (e.g., a social worker, 4%). Following Afifi and Caughlin (2006), who asked participants to rate the valence and significance of revealing secrets in personal relationships, participants in the current study then rated the valence of the interaction (1 = *extremely negative* to 7 = *extremely positive*) and the significance of the interaction (1 = *extremely insignificant* to 7 = *extremely significant*). Higher scores on the valence item represented greater positivity ( $M = 5.26$ ,  $SD = 1.66$ ,  $Range: 1-7$ ), and higher scores on the significance item indicated greater significance ( $M = 4.06$ ,  $SD = 1.83$ ,  $Range: 1-7$ ).

Qualitative data about past disclosure experiences were thematically analyzed according to analysis procedures outlined by Saldaña (2009). First, multiple descriptive and process codes were assigned to each memorable message description (e.g., safer sex). Topical, descriptive codes were meant to summarize and condense the data (Saldaña, 2009). Process codes were similar to descriptive codes, except that they captured actions rather than topics. Process codes for past disclosure experiences data included "wrote sexual orientation on a form" and "same-gender pronoun use." Themes emerged as an outcome of the coding and analytic reflection processes.

## **Perceived Visibility**

Perceived visibility describes the markers that some LGB individuals employ to make their sexual minority status known, while others may "pass" as heterosexual to a health care provider's eye. A new measure was created to capture patients' self-perceived visibility of sexual minority status. Even if an individual believes he or she is employing many markers of sexual minority status, a health care provider may or may not interpret the markers accordingly. Therefore, it is necessary to ask participants about the markers they believe they employ as well as how they think those markers are perceived by healthcare providers. A new measure was created to capture patients' self-perceived visibility of sexual minority status.

Lasser and Tharinger's (2003) study of LGB youth and visibility management served as a conceptual foundation for the creation of this instrument. The researchers defined visibility management as the "dynamic, ongoing process by which LGB youth make careful, planned decisions about whether they will disclose their sexual orientation, and, if they decide to disclose, to whom and how they disclose, and how they continue to monitor the presentation of their sexual orientation in different environments" (p. 233). Participants in their study reported various levels of expressions of "outness" at school and in their respective families.

In the current study, participants responded to five items using a scale of 1 to 4 (1 = *disagree* to 4 = *agree*). Questions included: (1) I think other people can tell that I am not heterosexual just by looking at me; (2) I think other people can tell that I am not heterosexual just by listening to me speak; (3) I intentionally try to communicate my LGB status nonverbally (e.g., clothes, hairstyle, etc.); (4) No one would know about my LGB status if I didn't explicitly tell them (reverse scored); (5) It is important to me to be recognized as LGB by other LGB individuals. Initially, before making any modifications

to the measure, the results of a CFA were as follows:  $\chi^2(5) = 54.38, p = .00, CFI = .85, RMSEA = .22$ . Upon reconsideration of the logic of each item as it related to the overall scale, the third item was dropped because it did not relate to how others perceive the self. The resulting, final CFA revealed that items loaded onto one latent construct  $\chi^2(2) = 1.68, p = .43, CFI = 1.00, RMSEA = .00$ . Higher scores on this measure represent greater agreement with each statement, indicating greater levels of self-perceived visibility of sexual minority status ( $M = 2.38, SD = .76, Range: 1-4, \alpha = .70$ ).

### **Screening**

Screening describes the process that patients engage in before choosing a health care facility or provider. This includes patients soliciting recommendations for clinics and gathering information about providers. The majority of research regarding LGBT online information seeking has focused on information seeking about sexual health in particular (e.g., Magee, Bigelow, DeHaan, & Mutanski, 2011). One exception is Boehmer & Case's (2004) qualitative analysis of disclosure of sexual orientation to physicians among women with breast cancer. Evidence suggests that LGB individuals engage in screening before meeting with a healthcare provider, however, researchers have not quantitatively collected data regarding this specific variable. This measure was created for the purposes of the current project.

Participants were directed to think back to the last time they received healthcare services. Next, they responded to eight items about screening behaviors using a scale of 1 to 4 (1 = *not at all* to 4 = *a lot*). Items included: (1) I looked for information about the provider before making an appointment; (2) I looked for information about the facility before making an appointment; (3) I looked for information about the provider after making an appointment; (4) I looked for information about the facility after making an

appointment; (5) I looked up information on the internet about the provider or facility before going to my appointment; (6) I gathered information from other people about the provider or facility before going to my appointment; (7) I searched the internet for a recommended provider; (8) I searched specifically for LGB-friendly providers or facilities. Initially, before making any modifications to the measure, the results of a CFA were as follows:  $\chi^2(20) = 113.82, p = .00, CFI = .83, RMSEA = .15$ . Items three and four were not included in subsequent analyses because each of them dealt with behaviors that occurred *after* a health care appointment. Modification indices suggested including two correlated error terms (items six and seven, and items six and eight). A final CFA revealed that items loaded onto one latent construct,  $\chi^2(7) = 10.19, p = .18, CFI = .99, RMSEA = .05$ . Higher scores on these items indicate a greater amount of screening behaviors ( $M = 2.06, SD = .89, Range: 1-4, \alpha = .88$ ).

### **Disclosure Efficacy**

The disclosure efficacy construct was measured using an existing instrument. The instrument is composed of four items, following Afifi and Steuber's (2009) work on disclosure and communication efficacy. The four items were taken from a larger scale (from Afifi & Caughlin, 2006), from which the four-item scale has illustrated good reliability (Cronbach's alpha was .92) and "a confirmatory factor analysis revealed that all of the items loaded highly (.79 to .90) onto the latent construct of communication efficacy" (p. 159). Using a 7-point Likert-type scale ( $1 = strongly agree$  to  $7 = strongly disagree$ ), participants responded to the following statements, which have been edited from "secret" to "sexual orientation" and "doctor or other healthcare professional" language to reflect the goals of the current study: (1) I wouldn't know what to say if I tried to tell my doctor or other healthcare professional about my sexual orientation; (2) I

wouldn't even know how to begin telling this person my sexual orientation; (3) I can't think of any way to tell my doctor or other healthcare professional the information; (4) I don't even know how to approach the issue with my doctor or other healthcare professional. All items were reverse-scored. A CFA revealed that items loaded onto one latent construct,  $\chi^2(2) = 2.32, p = .31, CFI = 1.00, RMSEA = .03$ . Higher scores on the scale indicate higher levels of disclosure efficacy. Higher scores represented greater levels of disclosure efficacy ( $M = 5.63, SD = 1.76, Range: 1-7, \alpha = .96$ ).

### **Target Efficacy**

The target efficacy construct was measured using a newly created scale based on existing research regarding patient-provider communication and disclosure. According to Greene (2009), assessing the receiver of a disclosure depends on relational quality and the anticipated response to a disclosure. Similarly, according to Dindia (1998), it depends on target characteristics and the anticipated reaction. Meta analyses of the relevant literature point to the importance of attentiveness, professional skills, empathy, reassurance, supportiveness, responsiveness, positivity, and friendliness (Beck, Daughtridge, & Sloane, 2002; Ong, de Haes, Hoos, & Lammes, 1995; Zachariae et al., 2003).

Drawing from this previous research, participants used a scale of one to four ( $1 = not at all$  to  $4 = very much$ ) to reply to 11 items regarding their most recent experience with a health care provider. Items included: (1) How attentive was this provider?; (2) How professionally skillful was this provider?; (3) How empathetic was this provider?; (4) How reassuring was this provider?; (5) How supportive was this provider?; (6) How responsive was this provider?; (7) How judgmental was this provider?; (8) How positive was this provider?; (9) How friendly was this provider?; (10) How courteous was this

provider?; (11) How informative was this provider? Item 7 ("judgmental") was reverse-scored. Initially, before making any modifications to the measure, the results of a CFA were as follows:  $\chi^2(44) = 150.76, p = .00, CFI = .92, RMSEA = .11$ . The seventh item was dropped because it appeared to be the sole item loading on a second factor. One possible explanation for this is that participants did not note the negative trait ("judgmental") amidst the positive traits. Modification indices suggested including five correlated error terms (items nine and eight, ten nine and ten, two and eleven, two and one, and five and three). After the seventh item was dropped, a final CFA revealed that items loaded onto one latent construct,  $\chi^2(30) = 38.40, p = .14, CFI = .99, RMSEA = .04$ . Higher scores indicated greater amounts of target efficacy ( $M = 3.34, SD = .72, Range: 1-4, \alpha = .96$ ).

### **Disclosure**

Likelihood of future disclosures of sexual orientation identity to health care providers was measured on a sliding scale (0 = *not at all likely* to 100 = *extremely likely*). Higher scores indicated greater likelihood of future disclosures of sexual orientation ( $M = 72.40, SD = 28.95, Range: 0-100$ ).

## **Chapter 3: Results**

### **PRELIMINARY ANALYSIS**

The first preliminary data analysis involved examining the data for missing values. The default in Mplus is to use all available data points, which was the procedure utilized here (i.e., listwise deletion was not employed). The skip logic, regarding whether or not participants could recall a memorable message and whether or not participants had a past disclosure experience on which to report, dictated that participants answered further questions about their experiences only if they had experiences on which to report. To manage the outcome of the skip logic, hypotheses regarding memorable messages and past disclosure experiences were separated out for the main analyses. A table of correlations among the variables is provided in Table 3. Normality of data is not an assumption for independent variables in path analysis; however, the data related to the outcome variable was visually inspected and appeared to be normally distributed.

Table 3: Correlations Among the Variables

| Variable                        | 1     | 2   | 3      | 4     | 5   | 6   | 7      | 8      | 9  |
|---------------------------------|-------|-----|--------|-------|-----|-----|--------|--------|----|
| 1. Memorable Message Positivity | --    |     |        |       |     |     |        |        |    |
| 2. Memorable Message Influence  | .04   | --  |        |       |     |     |        |        |    |
| 3. Past Disclosure Positivity   | .11   | .08 | --     |       |     |     |        |        |    |
| 4. Past Disclosure Significance | -.30* | .04 | -.04   | --    |     |     |        |        |    |
| 5. Self-Perceived Visibility    | -.03  | .09 | .12    | .07   | --  |     |        |        |    |
| 6. Screening                    | -.04  | .16 | .15    | .11   | .04 | --  |        |        |    |
| 7. Disclosure Efficacy          | .14   | .14 | .19*   | -.10  | .12 | .08 | --     |        |    |
| 8. Target Efficacy              | -.03  | .04 | .56*** | -.03  | .10 | .09 | .30*** | --     |    |
| 9. Disclosure Likelihood        | .03   | .18 | .15    | -.17* | .11 | .09 | .55*** | .28*** | -- |

Note: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Next, I conducted a preliminary analysis to investigate whether or not sexual orientation should be treated as a control variable in the main analyses. Previous research has indicated that differences in receiving and interacting with health care systems exist due to sexual orientation. Indeed, this was the case for the current study. A one-way ANOVA was computed to compare likelihood of disclosure of individuals of differing sexual orientations. A significant difference was found among sexual orientations,  $F(4,187) = 4.31$ ,  $p < .01$ . Tukey's *HSD* was used to determine the nature of the differences between sexual orientations. This analysis revealed that individuals identifying as bisexual were statistically significantly least likely to make a future disclosure ( $M = 55.54$ ,  $SD = 31.11$ ) as compared with individuals identifying as lesbian or gay. Individuals identifying as gay were most likely to make a future disclosure ( $M =$

79.09,  $SD = 24.34$ ). Individuals identifying as lesbian ( $M = 76.42$ ,  $SD = 26.46$ ), queer ( $M = 68.22$ ,  $SD = 34.44$ ), or in multiple ways ( $M = 72.48$ ,  $SD = 31.51$ ) were less likely than gay-identified participants to make a future disclosure, yet more likely than bisexual-identified participants to make a future disclosure. Sexual orientation was controlled for in all subsequent analyses.

Finally, post-hoc power analyses were completed for the models using G\*Power, following Cohen's (1988) guidelines for effect sizes. For the memorable messages model, the post-hoc power analysis indicated that power to detect large effect sizes ( $>0.50$ ) or medium effect sizes ( $>0.30$ ) was 0.99. Power to detect small effect sizes ( $>0.10$ ) was 0.90. For the past disclosures model, the post-hoc power analysis indicated that power to detect large effect sizes ( $>0.50$ ) or medium effect sizes ( $>0.30$ ) was 0.99. Power to detect small effect sizes ( $>0.10$ ) was 0.97.

## **MAIN ANALYSIS**

Mplus (Muthen & Muthen, 2010) was used to conduct path analyses to test each hypothesis and answer each research question. Hypotheses and research questions were combined into four testable models (see Appendix C for all model figures). These four models, the memorable messages model, the mediated memorable messages model, the past disclosures model, and the mediated past disclosures model were examined using path analysis. With the exception of screening and target efficacy, all variables were treated as observed. Screening and target efficacy were treated as latent variables because each contained correlated error terms as suggested by Lagrange multiplier tests. Path analysis using Mplus allows for the inclusion of latent variables and investigations of the strength of direct and indirect effects (Muthen & Muthen, 2010). Maximum likelihood, the default Mplus estimator, was used for path analysis procedures. Only standardized

values are reported here because these values more clearly relate to the variables of interest than do the figures associated with unstandardized values, which are not in an understandable unit of analysis (Schreiber, Nora, Stage, Barlow, & King, 2006).

Mplus output included the fit indices that were chosen a priori to assess model fit. A non-significant chi-square score is desired for the overall test of model fit. Information criteria include Akaike (AIC) and Bayesian (BIC) values, with smaller AIC and BIC values being more desirable because they indicate a greater likelihood that the model will cross-validate with other samples or populations. Hu and Bentler (1999) recommended joint criteria to retain a model. For example, they recommended a CFI value equal to or greater than .96 with a SRMR value equal to or lesser than .10, or a RMSEA value equal to or lesser than .06 with a SRMR value equal to or lesser than .10. Utilizing joint criteria maximizes the likelihood of retaining the right model (Hu & Bentler, 1999). To measure the indirect effects hypothesized by the mediated memorable messages model and the mediated past disclosures model, the bias-corrected bootstrapping method was employed so that 95% confidence intervals were used with 1000 samples. This helped to correct for possible biased results and was a better option than simply assuming an underlying normal distribution of indirect effects (MacKinnon, Lockwood, & Williams, 2004).

As seen in Table 4, the models showed mixed fit overall. Fit indices, taken together, for the memorable messages and mediated memorable messages models illustrated that these models did not fit the data well. Only the past disclosures model had a non-significant chi-square test of model fit. The chi-square test of model fit is sensitive to small sample size, so it was evaluated as part of a holistic, joint-criteria method of judging model fit. Fit indices for the mediated past disclosures model were acceptable, with the exception of the significant chi-square. Finally, findings originating from the thematic analysis of the qualitative data collected regarding memorable messages and

past disclosure experiences are also presented here, alongside the quantitative results for each of the predictive models.

Table 4: Hypothesized Model Results

| Model   | $\chi^2$ ( <i>df</i> ) | <i>p</i> -value | CFI | RMSEA | SRMR | AIC     |
|---|------------------------|-----------------|-----|-------|------|---------|
| Memorable Messages<br>( <i>n</i> = 89)          | 59.36 (36)             | .01             | .93 | .09   | .08  | 2278.82 |
| Mediated Memorable Messages<br>( <i>n</i> = 89) | 281.77 (189)           | <.001           | .93 | .07   | .09  | 4116.47 |
| Past Disclosures<br>( <i>n</i> = 138)           | 48.10 (36)             | .09             | .97 | .05   | .06  | 3481.24 |
| Mediated Past Disclosures<br>( <i>n</i> = 138)  | 279.66 (189)           | <.001           | .95 | .06   | .08  | 6011.15 |

*Note:* CFI = comparative fit index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual; AIC = Akaike information criterion.

### Memorable Messages Model Summary

The following hypotheses and research questions were integrated into one model, named the memorable messages model. Specifically, H1a predicted that the more positive a memorable message was, the more likely it is that a participant will disclose his or her sexual orientation to a health care professional again in the future. H1b predicted that the more influential the memorable message, the more likely it is that he or she will disclose his or her sexual orientation in the future. RQ3 inquired how self-perceived

visibility of sexual minority status affects the likelihood of future disclosure, and RQ4 asked how screening behaviors affect the likelihood of future disclosure.

### **Memorable Messages Model Results**

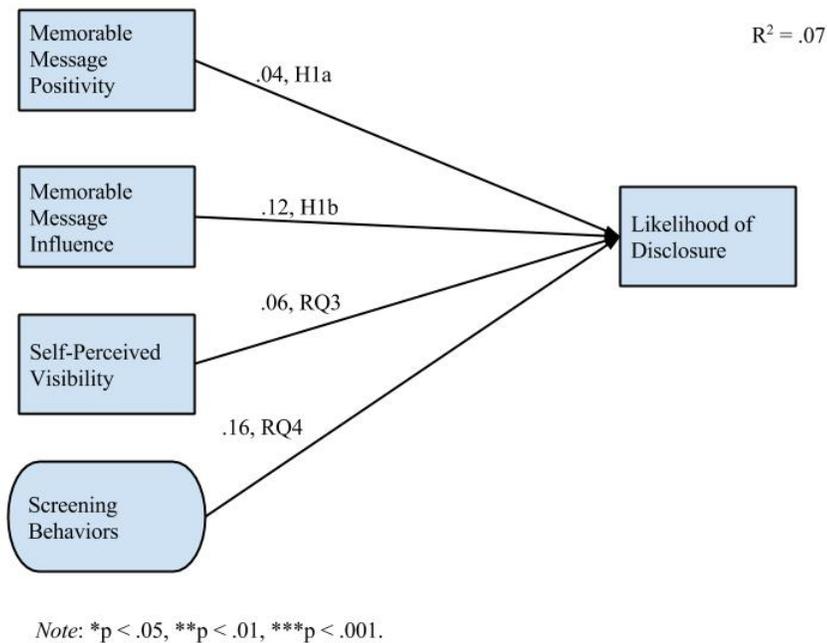
Fit indices for the memorable messages model were unsatisfactory. This model contained unsupported hypotheses regarding the predictive function of memorable messages on likelihood of disclosure. Hypotheses 1a and 1b were not supported; positivity and influence of memorable messages about sexual orientation and health care did not significantly predict likelihood of future disclosures to providers. Self-perceived visibility did not significantly predict likelihood of disclosure (RQ3), and screening behaviors did not significantly predict likelihood of disclosure (RQ4). Although these predictive paths were not significant, they were in the hypothesized, positive direction. See Table 5 for standardized total, direct, and indirect effects on likelihood of disclosure. Figure 1 (and Appendix C) displays this information as well.

Table 5: Standardized Total, Direct, and Indirect Effects on Likelihood of Disclosure (Memorable Messages)

| Variables                 | Direct | Indirect | Total |
|---------------------------|--------|----------|-------|
| Memorable Messages Model  | -      | -        | -     |
| Memorable Messages        | -      | -        | -     |
| Positivity                | .04    | -        | .04   |
| Influence                 | .12    | -        | .12   |
| Self-Perceived Visibility | .06    | -        | .06   |
| Screening                 | .16    | -        | .16   |

*Note:* \*p < .05, \*\*p < .01, \*\*\*p < .001.

Figure 1: Memorable Messages Model



### Mediated Memorable Messages Model Summary

The following hypotheses and research questions were integrated into one model, named the mediated memorable messages model, which included disclosure efficacy and target efficacy. Specifically, H3a predicted that the more positive the message made the individual feel, the higher disclosure efficacy will be, and the more likely it is that the participant will disclose. H3b predicted that the more influential the memorable message, the higher disclosure efficacy will be, and the more likely it is that the participant will

disclose. H5a predicted that the more positive the memorable message, the higher target efficacy will be, and the more likely it is that the participant will disclose again in the future. H5b predicted that the more influential the memorable message, the higher target efficacy will be, and the more likely it is that the participant will disclose.

RQ5a asked if and how disclosure efficacy mediated the relationship between self-perceived visibility of sexual minority status and disclosure likelihood, and RQ6a asked if and how target efficacy mediated the relationship between self-perceived visibility of sexual minority status and disclosure likelihood. RQ5b asked if and how disclosure efficacy mediated the relationship between screening behaviors and disclosure likelihood, and RQ6b asked if and how target efficacy mediated the relationship between screening behaviors and disclosure likelihood.

### **Mediated Memorable Messages Model Results**

Fit indices for the mediated memorable messages model were unsatisfactory. This model contained unsupported hypotheses regarding the predictive function of memorable messages on likelihood of disclosure, mediated by efficacy variables. Hypotheses 3a, 3b, 5a, and 5b were not supported; positivity and influence of memorable messages about sexual orientation and health care did not significantly predict likelihood of future disclosures to providers when mediating variables (i.e., disclosure efficacy and target efficacy) were included in the model. However, the mediated memorable messages model did display a significant direct path from disclosure efficacy to likelihood of disclosure.

Disclosure efficacy did not significantly mediate the relationship between self-perceived visibility and likelihood of disclosure (RQ5a) or the relationship between screening behaviors and likelihood of disclosure (RQ5b). Finally, target efficacy did not

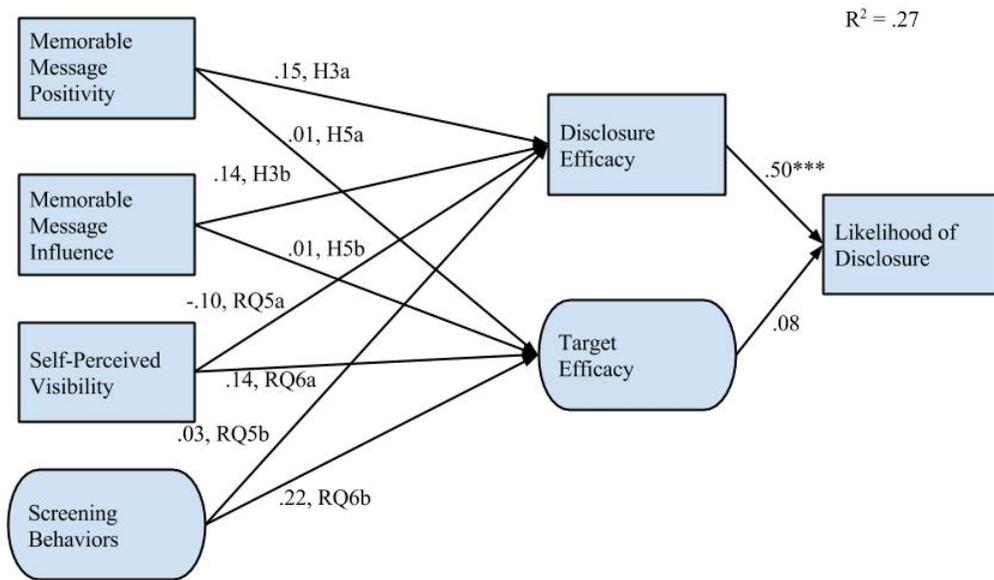
significantly mediate the relationship between self-perceived visibility and likelihood of disclosure (RQ6a) or the relationship between screening behaviors and likelihood of disclosure (RQ6b). See Table 6 for standardized total, direct, and indirect effects on likelihood of disclosure. See also Figure 2 (or Appendix C) for an illustration of this information.

Table 6: Standardized Total, Direct, and Indirect Effects on Likelihood of Disclosure (Mediated Memorable Messages)

| Variables                         | Direct | Indirect | Total  |
|-----------------------------------|--------|----------|--------|
| Mediated Memorable Messages Model | -      | -        | -      |
| Memorable Messages                | -      | -        | -      |
| Positivity                        | -      | .08      | .08    |
| Influence                         | -      | .07      | .07    |
| Self-Perceived Visibility         | -      | -.04     | -.04   |
| Screening                         | -      | .03      | .03    |
| Disclosure Efficacy               | .50*** | -        | .50*** |
| Target Efficacy                   | .08    | -        | .08    |

Note: \*p < .05, \*\*p < .01, \*\*\*p < .001.

Figure 2: Mediated Memorable Messages Model



Note: \*p < .05, \*\*p < .01, \*\*\*p < .001.

### Qualitative Memorable Messages Findings

RQ1 inquired about the content of patients' memorable messages about sexual orientation and receiving health care, and participants (n = 119) briefly described what they remembered someone telling them about going to the doctor and sexual orientation. Four themes emerged from an exploratory thematic analysis of these data: 1) stigma, heterosexism, and discrimination (65%); 2) safer sex practices (35%); 3) "coming out" and disclosure of sexual orientation (20%); 4) finding a health care provider (11%).

These themes resulted from the descriptive codes (i.e., topical codes) and process codes (i.e., action codes) initially assigned to each memorable message description. In some instances, messages contained more than one topic.

Occasionally, messages that contained stigma, heterosexism, or discrimination also included messages about safer sex practices and coming out disclosures. For example, one participant explained, "Multiple lesbian friends of mine tell me how that even though they disclose their orientation they are treated as if they still have sex with men. Often asked to start birth control in case they start sleeping with men." Messages like this one may make participants feel socially supported and in solidarity with one another, or messages like this may make participants feel pessimistic about their chances of receiving tailored care from competent providers. In summary, memorable messages contained some material that may have been interpreted negatively and other information that may have been positively received.

Participants, as a whole, received conflicting advice about whether or not to disclose their sexual orientation to a health care provider. Notably, 20% of descriptions of memorable messages illustrated themes about "coming out" and disclosure of sexual orientation, which can help contextualize the positive predictive relationship between disclosure efficacy and likelihood of disclosure. One individual wrote that someone said, "Remember to inform them when they don't ask." Alternatively, another individual reported, "I remember a friend telling me that it would be embarrassing if I went to a doctor and identified as bisexual, and that I should just say I'm straight instead."

Some participants reported receiving messages containing factually incorrect information. For example, one woman explained, "My parent assumed that because I had only same-sex relationships, I would not need to be tested for STIs." Another individual wrote that he was told, "All gay people will need a doctor because they will get AIDS."

Although these conflicting, and sometimes factually incorrect, messages were reported as influential for the way people interacted with health care providers since the time of reception, other experiences over time may have had a larger predictive influence over coming out disclosure decision-making processes.

### **Past Disclosures Model Summary**

The following hypotheses and research questions were integrated into one model, named the past disclosures model. Specifically, H2a predicted that the more positive the past disclosure experience was, the more likely it is that an individual will disclose sexual orientation again the future. H2b predicted that the more significant the past disclosure experience was, the more likely it is that an individual will disclose sexual orientation again the future. RQ3 and RQ4 inquired about the influence of self-perceived visibility of sexual minority status and screening behaviors, respectively, on the likelihood of future disclosure.

### **Past Disclosures Model Results**

Hypothesis 2a was not supported; valence of the past disclosure experience did not significantly predict likelihood of future disclosure. Hypothesis 2b was not supported by the past disclosures model; the more significant the past disclosure experience, the lower the likelihood of future disclosure. Notably, the statistically significant path from significance to likelihood of disclosure was not in the direction hypothesized; more significant past disclosures were actually associated with lower intent to disclose in the future. In this model, self-perceived visibility significantly predicted likelihood of disclosure (RQ3). Importantly, the p-value for visibility was .049, which approached non-significance. Screening behaviors did not significantly predict likelihood of disclosure

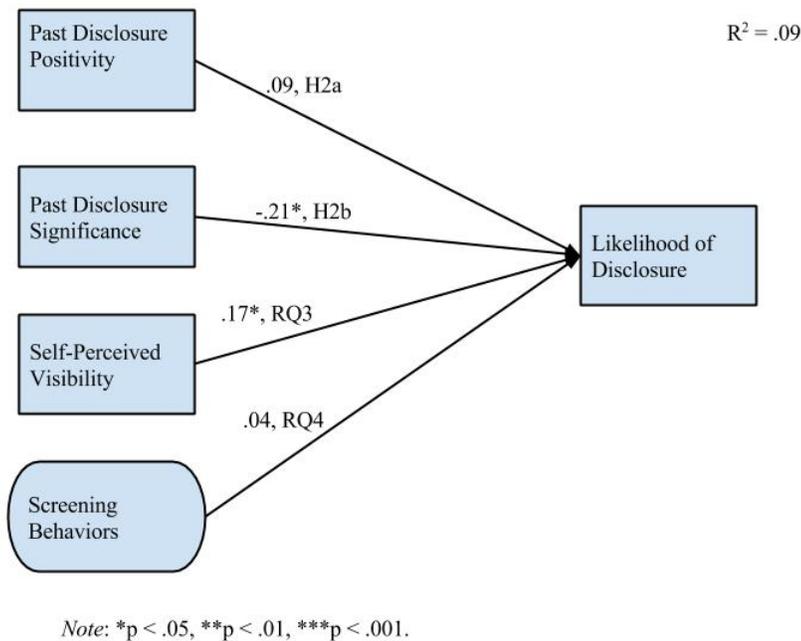
(RQ4). See Table 7 for standardized total, direct, and indirect effects on likelihood of disclosure. Figure 3 (and Appendix C) displays this information as well.

Table 7: Standardized Total, Direct, and Indirect Effects on Likelihood of Disclosure (Past Disclosures)

| Variables                 | Direct | Indirect | Total |
|---------------------------|--------|----------|-------|
| Past Disclosures Model    | -      | -        | -     |
| Past Disclosures          | -      | -        | -     |
| Positivity                | .09    | -        | .09   |
| Significance              | -.21*  | -        | -.21* |
| Self-Perceived Visibility | .17*   | -        | .17*  |
| Screening                 | .04    | -        | .04   |

Note: \*p < .05, \*\*p < .01, \*\*\*p < .001.

Figure 3: Past Disclosures Model



### Mediated Past Disclosures Model Summary

The following hypotheses and research questions were integrated into one model, named the mediated past disclosures model. H4a predicted that the more positive the past disclosure was, the higher disclosure efficacy will be, and the more likely it is that the individual will disclose again. H4b predicted that the more significant the past disclosure experience, the higher disclosure efficacy will be, and the more likely it is that the participant will disclose again. H6a predicted that the more positive the past disclosure, the higher target efficacy will be, and the more likely it is that the participant will

disclose again. H6b predicted that the more significant the past disclosure experience, the higher target efficacy will be, and the more likely it is that the participant will disclose again. RQ5a asked whether disclosure efficacy mediated the relationship between perceived visibility and disclosure likelihood, and RQ6a asked whether target efficacy mediated this relationship. RQ5b inquired whether disclosure efficacy mediated the relationship between screening behaviors and disclosure likelihood, and RQ6b asked whether target efficacy mediated this relationship.

### **Mediated Past Disclosures Model Results**

Hypothesis 4a was not supported by the mediated past disclosures model; disclosure efficacy did not significantly mediate the relationship between positivity of a past disclosure experience and likelihood of future disclosure. Positivity did not significantly predict disclosure efficacy. However, just as it did in the mediated memorable messages model, disclosure efficacy significantly predicted likelihood of disclosure. Hypothesis 4b was not supported by the mediated past disclosures model; disclosure efficacy did not significantly mediate the relationship between significance of a past disclosure experience and likelihood of future disclosure. Hypothesis 6a was partially supported. Positivity of a past disclosure experience significantly predicted target efficacy, but target efficacy did not significantly predict likelihood of disclosure. Hypothesis 6b was not supported; target efficacy did not significantly mediate the relationship between significance of a past disclosure experience and likelihood of future disclosure. In the mediated past disclosures model, significance appeared to have a negative predictive relationship to efficacy. Although these paths were not significant, it is worth noting that these relationships are in the opposite direction as hypothesized.

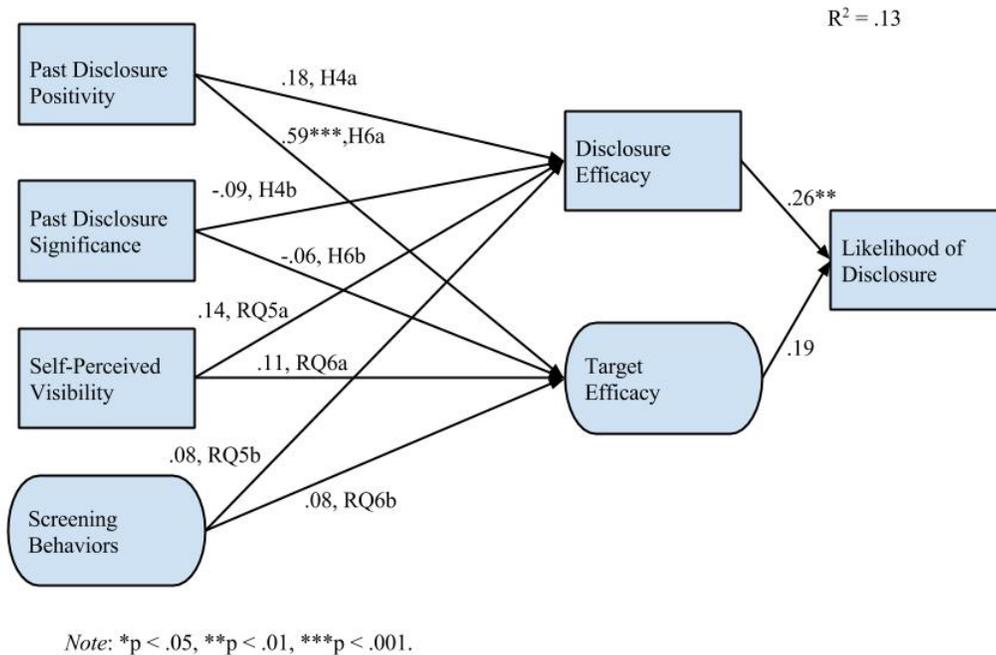
Disclosure efficacy did not significantly mediate the relationship between self-perceived visibility and likelihood of disclosure (RQ5a) or the relationship between screening behaviors and likelihood of disclosure (RQ5b). Finally, target efficacy did not significantly mediate the relationship between self-perceived visibility and likelihood of disclosure (RQ6a) or the relationship between screening behaviors and likelihood of disclosure (RQ6b). See Table 8 for standardized total, direct, and indirect effects on likelihood of disclosure. See also Figure 4 (or Appendix C) for an illustration of these results.

Table 8: Standardized Total, Direct, and Indirect Effects on Likelihood of Disclosure (Mediated Past Disclosures)

| Variables                       | Direct | Indirect | Total |
|---------------------------------|--------|----------|-------|
| Mediated Past Disclosures Model | -      | -        | -     |
| Past Disclosures                | -      | -        | -     |
| Positivity                      | -      | .16**    | .16** |
| Significance                    | -      | -.04     | -.04  |
| Self-Perceived Visibility       | -      | .06      | .06   |
| Screening                       | -      | .04      | .04   |
| Disclosure Efficacy             | .26**  | -        | .26** |
| Target Efficacy                 | .19    | -        | .19   |

Note: \*p < .05, \*\*p < .01, \*\*\*p < .001.

Figure 4: Mediated Past Disclosures Model



### Qualitative Past Disclosures Findings

RQ2 inquired about the content of patients' descriptions of past disclosure experiences, and participants ( $n = 151$ ) briefly described their most recent past disclosure experience. Five themes emerged from an exploratory thematic analysis of these data: 1) safer sex, including STIs, excluding birth control for women (29%); 2) talk about sexual or romantic same-gender partners (16%); 3) face-to-face or mediated responses solicited from health care providers (25%); 4) bisexual and lesbian women disclosing in the context of conversations about birth control (20%); 5) stigma, heterosexism, and

discrimination (11%). These themes resulted from the descriptive codes (i.e., topical codes) and process codes (i.e., action codes) initially assigned to each description of past disclosure experiences. Approximately half of past disclosure experiences occurred within the context of talking with health care providers about safer sex, STIs, or birth control.

These data may help to explain why the positivity of a past disclosure experience was indirectly predictive of future disclosure likelihood, why disclosure efficacy predicted future disclosure likelihood, and why the relationship from significance to likelihood of disclosure was negative. One participant wrote, "I told my current doctor about my active queer lifestyle during my first appointment. My doctor made it clear that this is good information to have and that it did not effect his treatment of me as a patient... This was good to hear." Another participant described a disclosure experience as "so nice" because the providers were "really welcoming and inclusive." Some wrote that disclosing was "no big deal," which may indicate relatively high levels of disclosure efficacy or low levels of significance. Not all past disclosure experiences were positive. One woman described telling her doctor that she was in a monogamous relationship with another woman and was not taking birth control pills because she was no longer concerned about unwanted pregnancy. This participant continued, "She [the doctor] still strongly pushed that I get back on oral birth control 'in case you go back to men one night' and listed no other reasons. I was very offended." Notably, there were many other cases in which bisexual and lesbian women made disclosures in the context of conversations about birth control without receiving stigmatizing, heterosexist, or discriminatory responses from providers.

### Trimmed, Fitted, Final Model

Following standard procedures for model trimming, the mediated past disclosures model was simplified for the sake of parsimony. Importantly, model trimming choices were made by examining quantitative model results and by carefully considering theoretical arguments for dropping or creating paths. See Table 9 for final model fit indices. Overall, the trimmed model displayed better fit than any of the previous models, which included the memorable messages model, the mediated memorable messages model, the past disclosures model, and the mediated past disclosures model. According to Hu and Bentler's (1999) joint criteria recommendations for fit indices in retaining the right model, the trimmed model illustrated good fit. Additionally, the AIC was lower for this model than any of the other previously tested models. This is important because it means that this model, compared to the other tested models in this study, is more likely to cross-validate with other samples or populations (Hu & Bentler, 1999).

Table 9: Trimmed Past Disclosures Model Results

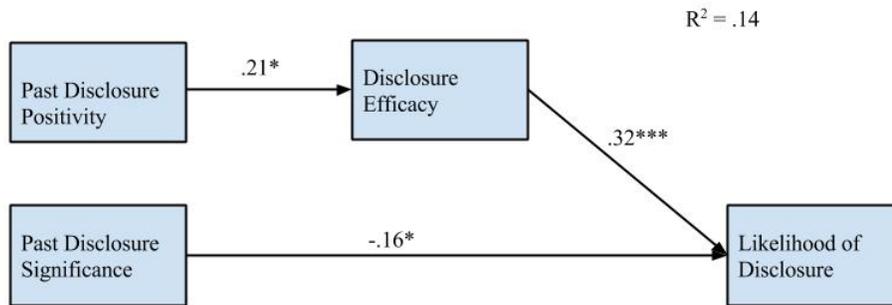
| Model                              | $\chi^2$ ( <i>df</i> ) | <i>p</i> -value | CFI  | RMSEA | SRMR | AIC     |
|------------------------------------|------------------------|-----------------|------|-------|------|---------|
| Trimmed Model<br>( <i>n</i> = 138) | .92 (2)                | .63             | 1.00 | .00   | .02  | 1724.24 |

*Note:* CFI = comparative fit index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual; AIC = Akaike information criterion.

The final model showed three relationships among four variables: 1) a statistically significant, positive predictive relationship from the positivity of a past disclosure experience to disclosure efficacy; 2) a statistically significant, positive predictive relationship from disclosure efficacy to likelihood of disclosure; 3) a statistically significant, direct, negative predictive path from significance of a past disclosure to likelihood of disclosure. See Figure 5 and Table 10 for additional final model

information. Taken together, this study showed that the best predictors of likelihood of future disclosure are the positivity of a past disclosure experience, as mediated by disclosure efficacy, and the significance of a past disclosure experience. Importantly, the predictive relationship between significance of a past disclosure experience and likelihood of disclosure is statistically significant, but in the opposite direction from the originally hypothesized relationship.

Figure 5: Trimmed, Fitted, Final Model



Note: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 10: Standardized Total, Direct, and Indirect Effects on Likelihood of Disclosure (Trimmed Model)

| Variables                      | Direct | Indirect | Total  |
|--------------------------------|--------|----------|--------|
| Trimmed Past Disclosures Model | -      | -        | -      |
| Past Disclosures               | -      | -        | -      |
| Positivity                     | -      | .07*     | .07*   |
| Significance                   | -.16*  | -        | -.16*  |
| Disclosure Efficacy            | .32*** | -        | .32*** |

Note: \*p < .05, \*\*p < .01, \*\*\*p < .001.

### Summary of Model Results

Overall, memorable messages variables were not predictive of likelihood of future disclosures. In the mediated memorable messages model, disclosure efficacy directly, positively predicted likelihood of disclosure, but not as hypothesized (i.e., not strictly as a mediating variable). In the past disclosures model, there was a statistically significant negative predictive relationship between significance of a past disclosure experience and likelihood of disclosure. Additionally, there was a barely significant positive predictive relationship between self-perceived visibility of sexual minority status and likelihood of disclosure. In the mediated past disclosures model, before model trimming, the positivity of a past disclosure experience illustrated a statistically significant positive, indirect predictive relationship to likelihood of disclosure. Additionally, in this model, there was a statistically significant negative predictive relationship between significance of a past disclosure experience and likelihood of disclosure; and disclosure efficacy directly, positively predicted likelihood of disclosure.

The trimmed, fitted, final model was a pared down version of the mediated past disclosures model. In this model, positivity of a past disclosure experience positively predicted disclosure efficacy, which in turn, positively predicted disclosure likelihood

(i.e., disclosure efficacy mediated the relationship between positivity and disclosure likelihood). An additional path illustrated that significance of a past disclosure experience negatively predicted likelihood of disclosure. See Table 11 (or Appendix C for figures) for a summary of all standardized total, direct, and indirect effects on likelihood of disclosure for each tested model. See Table 12 for a summary of all standardized partitioned effects for mediated models.

Table 11: Standardized Total, Direct, and Indirect Effects on Likelihood of Disclosure

| Models by Variable                | Direct | Indirect | Total  |
|-----------------------------------|--------|----------|--------|
| Memorable Messages Model          | -      | -        | -      |
| Memorable Messages                | -      | -        | -      |
| Positivity                        | .04    | -        | .04    |
| Influence                         | .12    | -        | .12    |
| Self-Perceived Visibility         | .06    | -        | .06    |
| Screening                         | .16    | -        | .16    |
| Mediated Memorable Messages Model | -      | -        | -      |
| Memorable Messages                | -      | -        | -      |
| Positivity                        | -      | .08      | .08    |
| Influence                         | -      | .07      | .07    |
| Self-Perceived Visibility         | -      | -.04     | -.04   |
| Screening                         | -      | .03      | .03    |
| Disclosure Efficacy               | .50*** | -        | .50*** |
| Target Efficacy                   | .08    | -        | .08    |
| Past Disclosures Model            | -      | -        | -      |
| Past Disclosures                  | -      | -        | -      |
| Positivity                        | .09    | -        | .09    |
| Significance                      | -.21*  | -        | -.21*  |
| Self-Perceived Visibility         | .17*   | -        | .17*   |
| Screening                         | .04    | -        | .04    |
| Mediated Past Disclosures Model   | -      | -        | -      |
| Past Disclosures                  | -      | -        | -      |
| Positivity                        | -      | .16**    | .16**  |
| Significance                      | -      | -.04     | -.04   |
| Self-Perceived Visibility         | -      | .06      | -.06   |
| Screening                         | -      | .04      | .04    |
| Disclosure Efficacy               | .26**  | -        | .26**  |
| Target Efficacy                   | .19    | -        | .19    |
| Trimmed Past Disclosures Model    | -      | -        | -      |
| Past Disclosures                  | -      | -        | -      |
| Positivity                        | -      | .07*     | .07*   |
| Significance                      | -.16*  | -        | -.16*  |
| Disclosure Efficacy               | .32*** | -        | .32*** |

Note: \*p < .05, \*\*p < .01, \*\*\*p < .001.

Table 12: Partitioned Effects for Mediated Models

| Models by Variable                   | Direct<br>Effect on<br>Disclosure<br>Likelihood | Indirect<br>Effect on<br>Disclosure<br>Likelihood | Direct<br>Effect on<br>Disclosure<br>Efficacy | Direct<br>Effect on<br>Target<br>Efficacy |
|--------------------------------------|---|---|---|---|
| Mediated Memorable<br>Messages Model | -   | -   | -   | -   |
| Memorable Messages                   | -   | -   | -   | -   |
| Positivity                           | -   | .08   | .15   | .01                                       |
| Influence                            | -   | .07   | .14   | -.04                                      |
| Self-Perceived Visibility            | -   | -.04  | -.10  | .14                                       |
| Screening                            | -   | .03   | .03   | .22                                       |
| Disclosure Efficacy                  | .50***  | -   | -   | -   |
| Target Efficacy                      | .08   | -   | -   | -   |
| Mediated Past Disclosures<br>Model   | -   | -   | -   | -   |
| Past Disclosures                     | -   | -   | -   | -   |
| Positivity                           | -   | .16**   | .18   | .59***                                    |
| Significance                         | -   | -.04  | -.09  | -.06                                      |
| Self-Perceived Visibility            | -   | .06   | .14   | .11                                       |
| Screening                            | -   | .04   | .08   | .08                                       |
| Disclosure Efficacy                  | .26**   | -   | -   | -   |
| Target Efficacy                      | .19   | -   | -   | -   |
| Trimmed Past Disclosures<br>Model    | -   | -   | -   | -   |
| Past Disclosures                     | -   | -   | -   | -   |
| Positivity                           | -   | .07*  | .21*  | -   |
| Significance                         | -.16*   | -   | -   | -   |
| Disclosure Efficacy                  | .32***  | -   | -   | -   |

Note: \*p < .05, \*\*p < .01, \*\*\*p < .001.

## **Chapter 4: Discussion**

Individuals who identify as lesbian, gay, or bisexual (LGB) face structural and interpersonal communication challenges in health care contexts due to additive minority stress (Meyer, 2007) and the potential for stigmatizing communication after "coming out" to providers as a sexual minority (Boehmer & Case, 2004; Dindia, 1998). Greene's disclosure decision-making model (DD-MM; 2009) guided this dissertation project as it sought to understand predictive factors of future disclosure of sexual orientation to health care providers. In order to investigate these predictive factors, five models were tested using path analysis procedures. Results indicated that past disclosure experiences and disclosure efficacy predicted intentions to disclose sexual minority status to providers. Additionally, results indicated the limited predictive power of memorable messages about sexual orientation and receiving care, self-perceived visibility of sexual minority status, patients' screening of providers before meeting for a health visit, and target efficacy. Next, study results are reviewed and explicated, followed by a discussion of the theoretical and practical contributions of this study, limitations of this study, and recommendations for future research.

### **MODELING PREDICTIVE FACTORS OF DISCLOSURE LIKELIHOOD**

Essentially, the final model was a trimmed, fitted version of the mediated past disclosures model. In this model, memorable messages variables, visibility, screening, and target efficacy were excluded because they illustrated a lack of predictive power on likelihood of future disclosure. Interpretations and further explications related to each of these variables are discussed in subsequent sections. In summary, disclosure efficacy

mediated the positive, predictive relationship from reported positivity of a past disclosure experience to likelihood of future disclosure.

The statistically significant findings observed here comport with existing research regarding stigma as it relates to disclosure decision-making processes, and with research regarding disclosure efficacy. The strand of research that addresses the role of stigma in disclosure decision-making can be traced from Goffman's (1963) foundational work on stigma to Dindia's (1998) explication of the theoretical relationship between stigma and disclosure to Greene and colleagues' (2003) social scientific studies of disclosure decision-making models. Indeed, these strands were evident in the current study as well. It is safe to assume that the principle characteristic of a positive disclosure experience is one that is free of felt and enacted stigma. This is especially important in light of research overlapping with the stereotyping literature which indicates that people who belong to a stigmatized group (i.e., LGBs) are more likely to "develop a heightened sensitivity to behaviors that may indicate the presence of prejudice or discrimination" (Rintamaki et al., 2007, p. 957). What we have evidence of from the present investigation is that positive past disclosure experiences heighten levels of disclosure efficacy. Perhaps a positive past disclosure experience can also counteract the negative effects of heightened sensitivity to prejudice.

In each of the mediated models that were tested, disclosure efficacy proved to be highly predictive of likelihood of disclosure. The results of this study indicated that patients were more likely to exhibit higher levels of disclosure efficacy if past experiences were positive. Based on exploratory qualitative findings from patients' descriptions of memorable messages and past disclosure experiences, it reasonable to extrapolate that patients hope for interactions with providers that are free of heterosexism and stigma. Patients who have more confidence in their ability to share information about

sexual orientation are more likely to communicate that information in health care settings.

Perhaps more surprising than the influence of positive past disclosure experiences and disclosure efficacy is the direct, negative predictive relationship between the reported significance of a past disclosure experience and likelihood of disclosure. Why did asking participants about "significance" appear to yield memories of disclosure that seem to make people hesitant to disclose again? One reason could be related to a measurement issue with participants assigning a negative connotation to the word "significance" in the content of patient-provider disclosure processes. It is also possible that participants did not assign a negative connotation to the word, and instead, the explanation for this finding is that any amount of significance given to a coming out disclosure experience is negative. This explanation is aligned with the finding that participants who report positive, mundane past disclosure experiences are more likely to disclose again in the future. Finally, perhaps it is the case that individuals harbor a negativity bias when reflecting upon past disclosure experiences, and the negativity bias is triggered by the word "significant." Certainly, this is a potential measurement issue of which researchers who study disclosure should be aware.

Additionally, the trimmed, fitted model presented here as the final model is not the only possible model available to explain these data. Other plausible models include a host of variables as direct predictors of likelihood of disclosure. Because sexual orientation must be controlled for in models predicting disclosure, models containing solely direct paths from observed variables are saturated. In other words, the number of free parameters in these models is exactly equal to the number of known values. Therefore, fit indices, including chi-squares, cannot be produced for these models. Although it is possible for these other, plausible models to fit the data, there is ample evidence to

support that the trimmed, fitted model presented here is the best model. For example, patients' screening behaviors of providers before a visit and target efficacy did not illustrate any significant predictive power of likelihood of disclosure. Self-perceived visibility of sexual minority status was predictive of disclosure in the past disclosures model, but the significance level was exactly .05 with rounding. Furthermore, visibility lost its barely-significant predictive power when mediating variables were included in models. Although this could indicate that the direct path from visibility to likelihood of disclosure is viable, thereby indicating that perhaps disclosure efficacy is not the biggest predictor of likelihood of disclosure, the role of visibility requires further investigation. Positivity of a past disclosure experience appeared to have a strong, indirect effect on likelihood of disclosure, as mediated by target efficacy in the mediated past disclosures model, however, target efficacy itself had no predictive power on likelihood of disclosure. Furthermore, it makes sense theoretically that positivity of a past disclosure experience would be directly related to disclosure efficacy, in turn, increasing one's likelihood to disclose again in the future.

## **THE (NON) PREDICTIVE ROLES OF VARIABLES**

### **Memorable Messages**

As indicated by the memorable messages and mediated memorable messages models, neither the emotion associated with a memorable message nor the self-reported influence of a memorable message significantly statistically predicted future disclosure of sexual orientation to a health care provider. Based on findings from previous research (Cody & Welch, 1997; Mayfield, 2001; Smith et al., 2009; Smith, Ellis, & Yoo, 2001), hypotheses predicted that the likelihood of disclosure would be higher for participants who reported a positive emotion associated with the memorable message, and that the

likelihood of disclosure would be higher for participants who reported that memorable messages were influential in the way they had interacted with health care providers since receiving the message.

Surprisingly, hypotheses regarding the predictive function of memorable messages were not supported. According to these data, there appeared not to be a theoretical feedback loop between memorable messages and disclosure decisions. Previous work (e.g., Knapp, Stohl, & Reardon, 1981) has explicated that memorable messages are rich sources of information for individuals about themselves, society, and ways of communication. Although this is likely true in theory, it is possible that LGB participants in this study have received other, more influential memorable messages than those about sexual orientation and receiving care. These other messages may have a greater impact on their reported future health behavior regarding coming out decisions in health care settings. For example, younger participants may be heavily influenced by messages from LGB elders, or older participants may be heavily influenced by the pro-coming out rhetoric of recent decades. Additionally, despite instructing participants to report on a message explicitly about sexual orientation and receiving health care, some participants appeared to report on a message with a broader reach (e.g, "It is your life, live it the way you believe best [sic], including doing what is best for your own body, not what the doctors think is best"). This comports with previous research about memorable messages which indicates that messages tend to transcend specific contexts and are instead generalized to many areas of life (Knapp, Stohl, & Reardon, 1981). If sexual minority status is important to identity, and identity permeates all areas of life, messages that participants reported on may have been more influential outside of solely the context of receiving health care.

On average, the messages that participants reported were relatively influential and in the neutral-to-negative emotion range, which perhaps is not surprising. Knapp and colleagues (1981) suggested that injunctions, a common form of memorable messages, often reflect conventional or even puritanical codes. In addition to the possibility that participants have received other, more influential memorable messages about sexual orientation and receiving care, it is also possible that these participants are exceptionally resilient. That is, despite having received influential, negative messages, many of which included evidence of discrimination or stigmatization of sexual minority status, likelihood of future disclosure could not be predicted based on these experiences.

Another possible explanation for these null results is power. Given that fewer than 100 participants responded to memorable messages items, there was not necessarily enough statistical power to detect smaller effects of the positivity and influence of memorable messages on likelihood of disclosure. Although memorable messages did not predict likelihood of disclosure in the current study, there is still ample evidence that LGB individuals receive influential messages containing stigmatization and discrimination, both of which are linked to the broader issue of additive minority stress and related health disparities for this population.

### **Self-Perceived Visibility of Sexual Minority Status**

Self-perceived visibility of sexual minority status did not predict likelihood of future disclosure in a stable way. There was a weak, non-statistically significant positive predictive path from visibility to likelihood of disclosure in the memorable messages model. In the past disclosures model, the positive predictive relationship was significant, but just barely so. In the mediated memorable messages model, there was a negative, non-significant path from visibility to disclosure efficacy and a positive, non-predictive

path from visibility to target efficacy. The instability of the direction of the predictive paths from visibility to likelihood of disclosure is further evidenced by its inclusion in the mediated past disclosures model. In the mediated past disclosures model, the non-significant paths to disclosure efficacy and target efficacy were both positive.

This finding, though somewhat unexpected, comports with the small body of existing literature there is on visibility of sexual minority status and making "coming out" disclosures to others. Researchers know that some, especially younger, LGB individuals make thoughtful choices about how to nonverbally communicate to those around them that they are not heterosexual (Lasser & Tharinger, 2003). This is contrary to Goffman's (1963) and Dindia's (1998) assertions about LGB identity as an invisible discreditable status. Others have argued that theirs is an oversimplification of visibility and stigma (e.g., Braithwaite, 1991; Smith, 2007). Indeed, these conflicting theorizations about the role of visibility were reflected in the instability of self-perceived visibility of sexual orientation as a reliable predictor of likelihood of disclosure in the current study. Researchers have mused that as LGB adolescents and young adults grow and mature, nonverbally communicating sexual orientation status becomes less important to some individuals. In this way, the age of the sample in the current study may have influenced the null findings. In other words, perhaps this sample, with an average age of nearly 30 years old, is no longer much concerned with outside appearances of sexual orientation status. In further support of this explanation, the mean for self-perceived visibility in this sample was relatively low at 2.38 out of a possible 4.00 ( $SD = .76$ ). Then again, it is possible that there simply was not enough variability in this sample.

Although the majority of the predictive paths regarding visibility were not statistically significant, the direction of the single significant predictive path indicated that it is possible that higher levels of self-perceived visibility of sexual minority status

predict greater likelihood of disclosure. There are several possible explanations for this finding. One is that if individuals believe their sexual orientation is visible to others, or somehow nonverbally communicated to others, they may be more likely to make the verbal disclosure because they are confirming what they have already indicated non-verbally. However, if this were the case, we would expect that visibility would also be significantly, positively predictive of disclosure efficacy. The unstable predictive power of visibility is further complicated by the unique challenges faced by individuals who identify as bisexual. As evidenced by the qualitative findings in which some bisexual individuals reported that friends and close others had told them to not disclose their bisexuality, and instead identify as heterosexual to health care providers (i.e., engage in self-bi erasure), and as evidenced by this group's overall lower likelihood of disclosure, self-perceiving oneself as less visible may actually have the opposite effect on likelihood of disclosure. That is, it is possible that for bisexual individuals alone, the relationship between visibility and disclosure may be a positive one. That is, as visibility increases, so would likelihood of disclosure. For instance, repeated microaggressions and heterosexism may contribute to instances of femme invisibility in particular (Bostwick & Hequembourg, 2014). Because sexual orientation was controlled for in the present study, the possibility of the predictive power of visibility on likelihood of disclosure for bisexual individuals should be investigated further. At any rate, the theoretical importance of visibility in stigma frameworks and its apparent instability as a predictive factor of disclosure make visibility worthy of ongoing inquiry.

### **Screening**

Patients' screening behaviors of providers before a visit was not statistically predictive of likelihood of disclosure in any of the tested models. In the memorable

messages model, mediated memorable messages model, past disclosures model, and mediated past disclosures model, results indicated a weak, positive predictive relationship from screening to disclosure efficacy, target efficacy, and likelihood of disclosure. Although previous research indicated that individuals need to be able to anticipate a positive or satisfying response before disclosing (Altman & Taylor, 1973; Petronio, Reeder, Hecht, & Mon't Ros-Mendoza, 1996), this did not appear to strictly be the case, so long as screening is a proxy for anticipating a certain kind of response. At least one qualitative study indicated that lesbians who disclosed their sexual orientation to a member of their care team did so, in part, because of the preparatory work they had done beforehand (Boehmer & Case, 2004). This preparatory work included asking their lesbian friends for physician recommendations. Other work has pointed to the increased likelihood of sexual minorities, as compared with heterosexuals, to engage in online information seeking about sexual health (Mitchell, Ybarra, Korchmaros, & Kosciw, 2014). Despite the results and findings of the research cited here, there was not sufficient evidence to create hypotheses regarding the predictive nature of screening behaviors on likelihood of disclosure.

Why did screening behaviors not predict likelihood of disclosure? One possible reason is that this sample did not engage in a large amount of screening or information seeking to begin with. The mean for the screening scale for this sample was 2.06 ( $SD = .89$ ) out of 4.00. Some evidence has suggested that adolescents and younger adults are more likely to engage in information-seeking behaviors (Magee, Bigelow, DeHaan, & Mustanski, 2011), and the average age of this sample was nearly 30 years old. Then again, information-seeking behavior may not mirror screening behavior, so this argument should be interpreted with caution. It is possible that the screening measure instead

captured variables like participants' propensity to reduce uncertainty before a doctor's visit.

Perhaps the most likely explanation for the relative insignificance of the predictive power of screening is rooted in measurement. Although the instrument used to measure screening illustrated good reliability and appeared to be unidimensional, it only captured screening behaviors that patients engage in before making a visit to a provider or health care facility. Importantly, the instrument did not address in situ screening behaviors that patients might engage in once they are at the visit. Although screening was not predictive of likelihood of disclosure, still it is useful for health care facilities to know that some LGB patients do engage in screening behaviors by asking peers for recommendations, searching online, or engaging in a host of other information-seeking activities.

### **Target Efficacy**

Target efficacy was hypothesized as a mediating variable in the mediated memorable messages model and in the mediated past disclosures model. In each case, target efficacy did not significantly predict likelihood of disclosure, however, in each case, results indicated a weak, positive predictive relationship. In the mediated past disclosures model, positivity of a past disclosure experience positively, significantly predicted target efficacy. There are two main reasons for the overall lack of predictive influence of target efficacy on likelihood of disclosure.

The first reason for the overall lack of predictive influence of target efficacy encompasses possible theoretical explanations. There is ample evidence to suggest that LGB individuals avoid coming out to providers because of providers' stigmatizing responses to this type of disclosure (Boehmer & Case, 2004; Eliason & Schope, 2001;

Harrison, 1996). It is also possible that LGB patients' disclosure decisions rest on something not studied in this project. For example, disclosure decisions could be more about the relevance of the information to the provider. Relevance of information to the provider was not the main focus of this investigation, however, it is referenced in the DD-MM. The second reason for the overall lack of predictive influence of target efficacy encompasses measurement-related explanations. These theoretical and measurement-related reasons are linked.

It is possible that the instrument used to measure target efficacy was not precise enough to capture the intended construct. The dyadic nature of disclosure makes the disclosure target's response critical to understanding disclosure decision-making processes (Greene et al., 2003). Perhaps this study would have benefitted from a measure regarding providers' anticipated or actual responses to a disclosure rather than asking participants about their perceptions of target characteristics (e.g., attentiveness, friendliness, courteousness, etc.) in a more general way. There is a possible age cohort effect here, too. For example, perhaps younger adults choose younger doctors and expect them to be LGBTQ allies. Although participants rated their physicians as an average of 3.34 ( $SD = .72$ ) out of a possible 4.00 on target efficacy, it is entirely possible that despite finding providers generally competent and kind, these opinions do not necessarily extend to disclosure decision-making processes. For example, it is possible for LGB patients to find providers competent and kind up until predicting or receiving a stigmatizing or discriminatory response to a coming out disclosure. In summary, a different, more specific instrument would have been useful in measuring the predictive power of target-related characteristics or responses on likelihood of future disclosure of sexual orientation.

Even though target efficacy did not significantly predict likelihood of disclosure, the positivity of a past disclosure experience strongly, significantly predicted target efficacy. Knowledge of this finding matters because it implies that health care providers play an important role in the patient disclosure process. Disclosure research indicates that disclosure targets' responses are important, and this finding builds on this knowledge because it indicates that target characteristics are important, too. If providers want to increase the likelihood of patient disclosures of potentially stigmatizing information, they should consider their patients' perspectives of them as kind, skilled communicators.

#### **THEORETICAL CONTRIBUTIONS AND IMPLICATIONS**

The current study answered Duggan and Thompson's (2011) call for interpersonal health communication scholarship that contributes to the "application of theory as an explanatory framework...for the unique dynamics of provider-patient interaction" (p. 423). In addition to contributing to scholarship related to the DD-MM (Greene, 2009), this study contributes also to communication privacy management theory, making goal-driven choices about disclosure, coming out frameworks, and additive minority stress in health care contexts.

First and foremost, the results of this study make a contribution to existing knowledge about the DD-MM. A primary reason for grounding the current study in the DD-MM was because it is one of the few process-oriented models that include a theoretical feedback loop between disclosure outcomes and decisions to disclose (Greene, 2009). In this study, as reflected by existing literature on disclosure, it was evident that individuals weigh the risks and benefits of making disclosures. One of the goals of the current study was to contribute evidence of theoretical feedback loops in disclosure processes and scholarship. Certainly results of the mediated past disclosures model and

the trimmed, final model support the existence of such a feedback loop. For instance, the strongest predictors of likelihood of future disclosure were variables related to past disclosure experiences. Greene and colleagues' (2012) recommendation to continue examining why it is that "people expect and prepare for the worst [disclosure] outcomes and how this affects access to support and potentially increases stress" (p. 365) is worth echoing here, especially given the importance of past disclosure experiences. Additionally, in the DD-MM, disclosure efficacy mediates the relationship between information aspects (e.g., stigma, preparation) and an individual's decision to disclose. Results from the current study offer further support for disclosure efficacy as a mediating variable. Disclosure models, including this one, have confirmed that individuals with higher levels of disclosure efficacy are more likely to make disclosures (Greene et al., 2012).

Greene (2009) claimed that researchers know little about the influence of stigma on disclosure decisions, and the current study begins to address this gap in the literature. In other tests of the DD-MM, perceived information severity (or increased perceived stigma) has predicted a decreased likelihood of disclosure (Greene et al., 2012). In the current study, individuals who identified as bisexual were the least likely to disclose sexual orientation to a health care provider, and there is ample evidence to suggest that bisexuals bear the brunt of health disparities in the United States. Although this study cannot confirm or deny that having a bisexual identity is equated with greater "perceived information severity" (Greene et al., 2012), or higher levels of perceived stigma, this is a likely possibility. This study can confirm that perceived information severity and stigma are important variables to account for when predicting likelihood of disclosure in health contexts.

Despite offering some evidence in support of the DD-MM, not every result of the current study supports the DD-MM. For example, Greene's (2009) model illustrates target efficacy as a mediating variable from information aspects to disclosure decisions. In the present study, target efficacy did not mediate predictive relationships from past disclosure experiences to likelihood of future disclosure. As previously discussed, this discrepancy could be due to differences in how researchers measure target efficacy. This discrepancy could also be due to the particular context of this study. That is, most of the studies that have utilized the DD-MM have done so to examine disclosures of illness (Greene et al., 2012) rather than sexual orientation. Notably, the DD-MM does not include predictors related to memorable messages, and memorable messages did not appear to have predictive power of disclosure likelihood in the current study.

Second, the results of this study make a contribution to communication privacy management scholarship, goal-driven choices about disclosure, and coming out frameworks. Although the results of this study do not indicate with great certainty that LGB individuals are particularly concerned about privacy boundaries around information about sexual orientation, it appeared to be likely that considerations of where information might travel post-disclosure was evaluated by some participants. One piece of evidence in support of this assumption is the differing levels of likelihood of disclosure to health professionals or channels. For example, participants, on average, were only 29% likely to disclose to a receptionist or other front office staff member versus 77% likely to disclose to a physician. Additionally, some memorable messages that participants described included advice about whether or not to disclose sexual orientation because of how the information might be used. For example, one memorable message contained a warning about HIV testing and government reporting. Whether or not patients have concerns about the confidentiality of the information they share in health care settings is an

important question across the sexual orientation and gender identity spectra. Furthermore, it has potential implications for patient perceptions of privacy laws and skepticism about technology use and electronic health records.

Making disclosure decisions is central to managing one's privacy. Existing literature points to individuals' disclosure decisions as goal-driven (e.g., Caughlin & Vangelisti, 2009), and we know that reasons to conceal and reveal information "reflect the multiple goals that individuals have for what they divulge or do not divulge" (Greene et al., 2003, p. 416). That the results of the current study indicated that individuals, despite receiving reportedly influential memorable messages from a variety of sources, were not particularly influenced to make disclosure decisions based on those messages, is evidence that other goals are at work. Certainly, results of the current study support Dindia's (1998) claim that disclosure is not a single, dichotomous event. Among this sample of LGB individuals, there was much variety in terms of past disclosure behavior and intent to disclose sexual orientation to providers in the future. In this way, Dindia's metaphor about "going into and coming out of the closet" (p. 105) holds true in the patient-provider context. Further evidence exists in support of this metaphor when examining the differences in mean percentages of outness to family, friends, and coworkers. Truly, "coming out" is not a single event for LGB individuals within or outside of the health care context. It is possible that patients wait until their second visit with a health care provider to disclose sexual orientation, thereby using the first appointment to screen the provider. Other patients might wait to disclose sexual orientation until directly asked by providers about sexual history.

Finally, the results of this study contribute to additive minority stress scholarship. Recall that additive minority stress explains that LGB individuals must deal with stress that a member of the sexual majority would not ordinarily deal with in encountering

health care providers, in addition to the stress of being a sexual minority in every day life. Additive stress increases the pressure on LGB individuals to adapt to potentially stigmatizing communication events (e.g., coping with a provider's unsupportive response to a coming out disclosure). Additive minority stress is hypothesized to be a main contributing factor, encompassing many social determinants of health, to emotional and physical health disparities (Bendelow, 2009). Nearly half of all descriptions of patients' past disclosure experiences occurred within the context of already somewhat stressful conversations about safer sex, STI testing and prevention, or pregnancy and birth control. There is ample evidence to suggest that conversations about safer sex and STI testing are already stressful for patients (e.g., Barth, Cook, Downs, Switzer, & Fischhoff, 2002; McCaffery, Waller, Nazroo, & Wardle, 2006), and dealing with the additional pressure of anticipating a potentially stigmatizing or discriminatory response to a disclosure of LGB status is likely even more stressful. Results of the current study indicated a negative predictive relationship from significance of a past disclosure experience to likelihood of future disclosure, which might be evidence that a less significant, or less stressful disclosure experience, can lead to patients being more likely to disclose again in the future.

#### **PRACTICAL CONTRIBUTIONS AND IMPLICATIONS**

It is likely that the cycle of stigmatizing communication and health disparities for LGB individuals will continue for some time, however, it is worth investigating what stakeholders (e.g., providers, patients) can do to mitigate problems of stigma, discrimination, and prejudice. For decades, the most common recommendations to providers have been to de-medicalize sexual minority status, interact with others non-discriminatorily, ask permission to ask about sexual history, and use direct, normalizing

language (Bonvicini & Perlin, 2003; Washer, 2009). The results of the current study indicated some specific practical recommendations for providers who interact with patients.

One overarching recommendation is for providers to exhibit efficacious communication about their patients' sexual orientation. Certainly this recommendation echoes from Shankle's (2006) *Handbook of LGBT Public Health: A Practitioner's Guide to Service*. For instance, not only is it important to ask patients with care about sexual behavior and identity and respond non-judgmentally, but also it is important for providers to know that behavior and identity do not always match (Chandra, Mosher, & Copen, 2011). Further evidence of this is drawn from the memorable messages that LGB individuals in the current study reported about being given advice to essentially erase their queer or bisexual identity based on the gender identity of their current sexual or romantic partner(s). Perhaps instances of bi erasure, which contribute to additive minority stress (Bostwick & Hequembourg, 2014) could become less frequent with increased provider education about differences between sexual behavior and identity and the importance of facilitating tailored responses for patients across the sexual orientation and gender identity spectra. This recommendation points to the importance of health literacy for providers and patients alike.

Researchers have illustrated the shortcomings of physician and patient education in addressing social determinants of health, including communicative/interactive and critical health literacy (Nutbeam, 2000). Exploratory qualitative findings indicated that at least some providers are sharing factually incorrect health information with LGB patients, especially with regards to risk factors for HIV and other STIs. In general, lower levels of health literacy for patients are associated with a host of poor health outcomes (Berkman et al., 2011), as is sexual minority status. One possible manifestation of low health

literacy for LGB patients includes not knowing why a provider is soliciting information about sexual orientation. Likewise, it is possible that providers have not been educated about how to ask patients about sexual orientation or why knowing a patients' sexual orientation is important during a health visit. Results from the current study indicated the strong, predictive function of patients' disclosure efficacy on likelihood of future disclosure to providers. Indeed, communication researchers have urged for patient trainings around communicative involvement with providers (Cegala, 2006). Improving health literacy around issues of communication about sexual orientation in the patient-provider context is one way to boost levels of disclosure efficacy and target efficacy for patients and providers.

Finally, based on results of the present study, I echo Boehmer and Case's (2004) recommendation to providers to avoid the assumption that all patients are heterosexual. They also recommended that providers create opportunities for disclosure. For example, providers can create opportunities for disclosure by using inclusive phrasing in health history questions, and providers can change intake forms to be inclusive of patients in same-sex relationships. The results and findings of the current study neither provide nor fail to provide evidence for these recommendations for providers to create opportunities for disclosure. It is likely that patients differ on their preferences for health care providers to create opportunities for disclosure. As long as the disclosure experience is relatively positive and mundane for patients, and it should be noted that providers play an essential role in facilitating these experience characteristics, creating opportunities for patients to disclose is relatively sound advice. Given the prevalence of heterosexism, stigma, and prejudice evident in memorable messages and patients' descriptions of past disclosure experiences, provider education about communication with patients should emphasize the

recommendation to avoid making assumptions about patients' sexual behavior, orientation, or identity.

#### **LIMITATIONS AND FUTURE DIRECTIONS**

Of course the results of this study should be interpreted in light of its limitations. Limitations are grouped into four categories: potential sample issues, potential measurement issues, the exclusion of provider perspectives, and a potential openness bias. Each limitation is discussed in detail below.

First, this study indicated that likelihood of disclosure can be predicted when researchers have information about patients' past disclosure experiences. However, we do not know much about individuals who do not have a past disclosure experience (i.e., those LGB individuals who reported never having made a coming out disclosure to a health care provider). This gap in knowledge limits the utility of the DD-MM as a theoretical jumping off point for modeling LGB patient disclosures. For example, the final model presented in this study does not account for participants who reported that they had never made a coming out disclosure to a health care provider. Therefore, researchers are challenged to capture what it is about non-disclosure experiences that is (or is not) predictive of eventual disclosure likelihood. In one study, researchers overcame this obstacle by collecting data from individuals who had not yet disclosed information to another person about their invisible illness status (Greene et al., 2012). This sampling method would allow future researchers to learn more about why patients who have not disclosed sexual orientation to a health care provider in the past may or may not do so in the future.

A second sampling issue is that this sample was relatively homogenous and well off (i.e., most people reported having insurance and were relatively well-educated).

Because of the homogeneity of the sample, the impact of additive minority stress could not be thoroughly addressed in predictive models. For example, it was impossible to assess how gender presentation, race, and income interacted with one another to predict basic health status or likelihood of disclosure. A third sampling issue has to do with sample size. There was not necessarily enough power to detect small differences in the memorable messages and mediated memorable messages models. The sample size for individuals who remembered and reported on a message was slightly under the recommended sample size of 100 for path analysis and structural equation modeling.

In addition to potential sampling-related limitations, measurement-related limitations should also be considered when interpreting the results of this study. For example, claims about causality should not be made, even in light of the fitted, final model. Instead, researchers should consider what other variables should have been included in the study to help explain the non-significant relationships between the variables. For example, perhaps social support, connectedness to the LGBTQ community, or type of geographical region (e.g., urban, suburban, rural) play a predictive role in likelihood of disclosure. Furthermore, using newly created measures, which have not been thoroughly assessed for validity, may have introduced some undesirable conceptual complexity in the models. This is especially important in models of disclosure because there appears to be some conceptual overlap between target efficacy and disclosure efficacy. It is possible that target efficacy is somewhat conceptually bound up in disclosure efficacy (Greene et al., 2012). Certainly this is an issue for researchers to continue to address. Ideally, researchers might also work to continue to address ways to assess characteristics of memorable messages and past disclosure experiences with more than one indicator per variable. In general, having more than one indicator per variable is desirable for structural equation modeling.

This study reflected a potential openness bias in that it accounted for the current guidelines and recommendations for providers to solicit disclosures about sexual orientation from patients, and for patients to disclose sexual orientation to providers. Scholarship in other areas has argued against unconditional openness (e.g., Bochner, 1982). Some research has provided evidence that openness is not always best in personal relationships (e.g., Caughlin & Vangelisti, 2004), but still the general recommendation is for patients to be "open" with providers about themselves and their health. Whether or not this is strictly true, in terms of perception at least, for LGB individuals in patient-provider contexts is unknown as of yet. If guidelines for patients and providers to be open with each other are to be followed, it is of utmost importance that each party is relatively skilled in navigating coming out disclosures in health care contexts.

Finally, provider perspectives were excluded from the current study. Disclosure processes necessarily involve two or more parties, and yet much research accounts for the perspective of only one of these parties. This study is not an exception. It is generally easier for researchers to gather patient perspectives, and part of the current study focused on disclosure issues as a source of physical and mental health disparities for LGB individuals. However, results of this study confirmed the importance of exploring and modeling provider characteristics and responses. Surely providers play a role in both maintaining and working to remedy health disparities.

### **Future Directions**

Results of this study indicated some useful future directions for subsequent research in the areas of interpersonal health communication, stigma, and disclosure. First researchers should heed Duggan and Thompson's (2011) advice to recognize the mutual provider-patient influence as an area ripe for future study. Second, measurement tools

used here should be refined and validated in hopes that doing so will allow them to be used to contribute to other areas of study. Third, researchers might consider examining disclosure, especially among stigmatized or minority populations, through an intersectional lens. Next, each direction for future research is elaborated.

Although researchers gain knowledge by collecting data on patient perspectives from patients themselves, much interpersonal health communication research neglects data collection with samples comprised of providers. Health care providers relevant to the current study include physicians, nurses, and front office staff members. Notably, participants reported that they would be more or less likely to disclose their sexual orientation to certain professional groups in the health care setting. This study cannot address LGB patients' coming out disclosures from providers' perspectives, even though having insight to this dyadic, communicative exchange is valuable. Thus, one future direction for further research on this topic is to collect provider perspectives.

Research on provider perspectives is not only valuable theoretically to the study of disclosure. Provider perspectives regarding the relative importance of LGB health disparities, education and training, and efficacy around issues of soliciting disclosure of sexual orientation could help guide further recommendations to address and intervene to work towards reducing health disparities in the United States. This research, paired with the research already available on patient perspectives, can help guide future studies regarding health literacy and practical implications for providers who provide care for LGB individuals. This is especially important given that the qualitative findings presented here indicated that some providers have shared factually inaccurate information with LGB patients, especially in discussing sexual health topics like HIV and STI risk and prevention. Research on provider perspectives can also offer insight about processes of soliciting patient disclosures of sexual orientation. For instance, if providers want to

collect sexual orientation data from patients, do they prefer to ask face to face or do so as part of a patient intake form? If patients want to disclose, how do they prefer to do it and why? Finally, it would be valuable to know how provider and patient preferences interact and predict a host of variables including patient satisfaction, accuracy of health information, health outcomes, and so on.

Currently, most national LGBTQ research and advocacy groups advocate for providers and health-related institutions to collect patient data on sexual orientation. However, there may be a gap between what providers know advocates recommend and how efficacious providers feel to follow these guidelines. Furthermore, providers may perceive other barriers that prevent them from following these national guidelines. Notably, there are some exceptions from experts for patients to disclose and providers to solicit disclosure about sexual orientation. These exceptions are mainly rooted in the idea that providers are not trained to be patient-centered nor are they communicatively competent when talking with patients about sexual orientation. One specific area of need for provider education has to do with sexual health education for LGBTQ populations. As evidenced in the current study, physicians and nurses alike often ask women of childbearing age about birth control before asking about sexual behavior and practices.

For the current study, new instruments to measure self-perceived visibility of sexual minority status, patients' screening behaviors of providers, and target efficacy were created. Although these measures appeared to be reliable and unidimensional, on the whole, they did not illustrate much predictive power regarding likelihood of disclosure. It is possible that this is a measurement-based issue, and so researchers would do well to refine and validate these measures. Refined and validated measures for these variables is important because each of these variables, at least theoretically, predicts likelihood of disclosure of sexual orientation in patient-provider contexts. Furthermore,

with refined and validated measures, these instruments could be used to investigate the predictors of disclosure of potentially stigmatizing information among other (in)visibly stigmatized groups. In other words, the theoretical implications for disclosure discussed earlier could also hold true for groups beyond the LGB context.

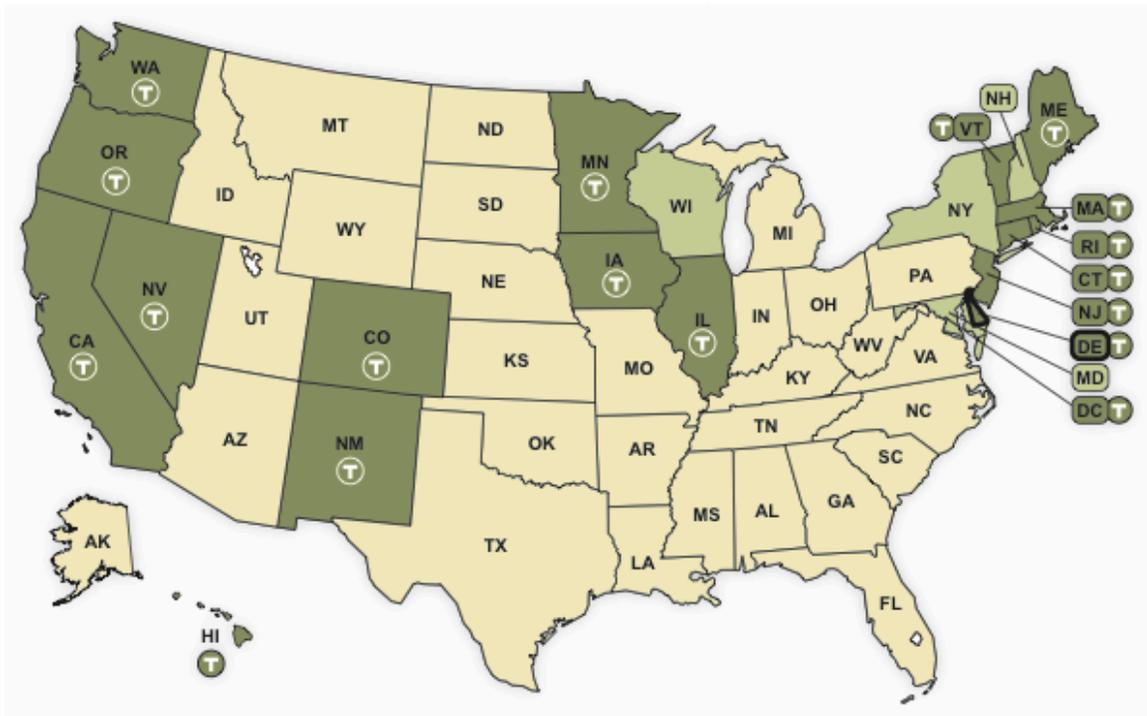
Finally, it is noteworthy that sexual orientation needed to be included as a control variable in this study for its influence on likelihood of disclosure. Certainly this result echoes other studies and reports that illustrate the prevalence and impact of bi invisibility, one of which is comparatively poorer health outcomes. In drawing from additive minority stress models and incorporating an intersectional lens, researchers can begin to assess the relative weight and additive influence of a host of stressors. With more varied samples, researchers can investigate how disclosure is influenced by a layered variety of demographics. We know that certain groups have worse health outcomes than others, and that these groups are also the least likely to disclose. What is the effect on disclosure when a patient claims two or more of these identities with typically worse health outcomes? Knowing results of studies like this can help researchers and practitioners create tailored, specific interventions for these groups.

## **CONCLUSION**

The overarching goal of this study was to explore the predictive power of memorable messages, past disclosure experiences, self-perceived visibility of sexual orientation, patients' screening behaviors of providers, disclosure efficacy, and target efficacy on likelihood of future disclosure of sexual orientation to health care providers. Results revealed that disclosure efficacy mediated the predictive relationship between positivity of past disclosure experiences and likelihood of future disclosure. Significance of a past disclosure experience directly, negatively predicted likelihood of future

disclosure. Taken together, results indicated that past disclosure experiences and disclosure efficacy are the most important factors to consider when predicting likelihood of future disclosure of sexual orientation to health care providers. It is possible that having a relatively positive, mundane disclosure experience can mitigate the negative effects of additive minority stress in the case of patient-provider interactions. Perhaps the impact of past disclosure experiences outweighs the impact of memorable messages on likelihood of disclosure, and it is not surprising that real-life experiences are more impactful than messages from others, despite their reported influence. Despite its limitations, this study contributes to scholarship about theoretical disclosure frameworks and begins addressing interpersonal health communication-based interventions to work towards the reduction of additive minority stress and health disparities for LGB people.



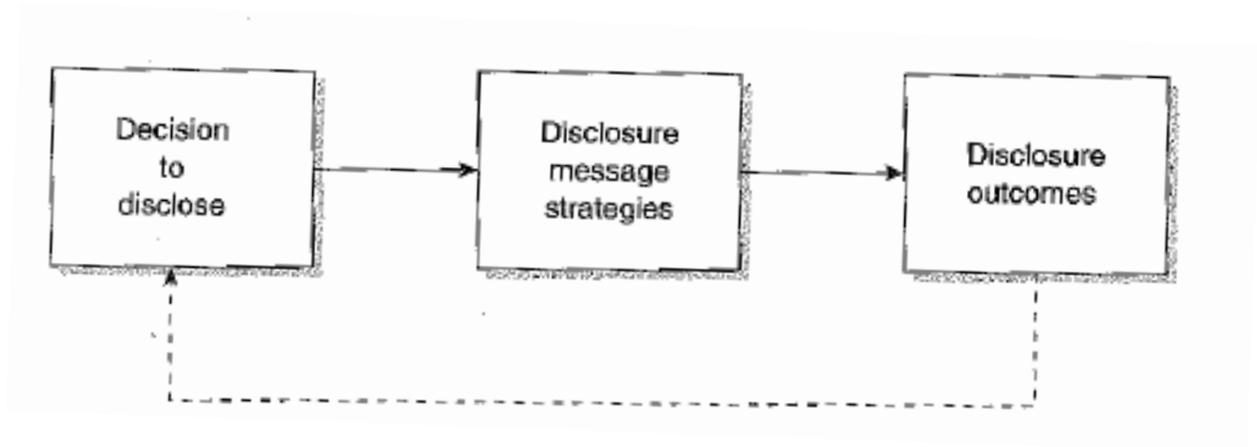


- Employment nondiscrimination law covers sexual orientation and gender identity (17 states + D.C.)
- Employment nondiscrimination law covers only sexual orientation (4 states)
- No employment nondiscrimination law covering sexual orientation or gender identity (29 states)
- Outlined - 1 state advancing on this issue in 2012-2013

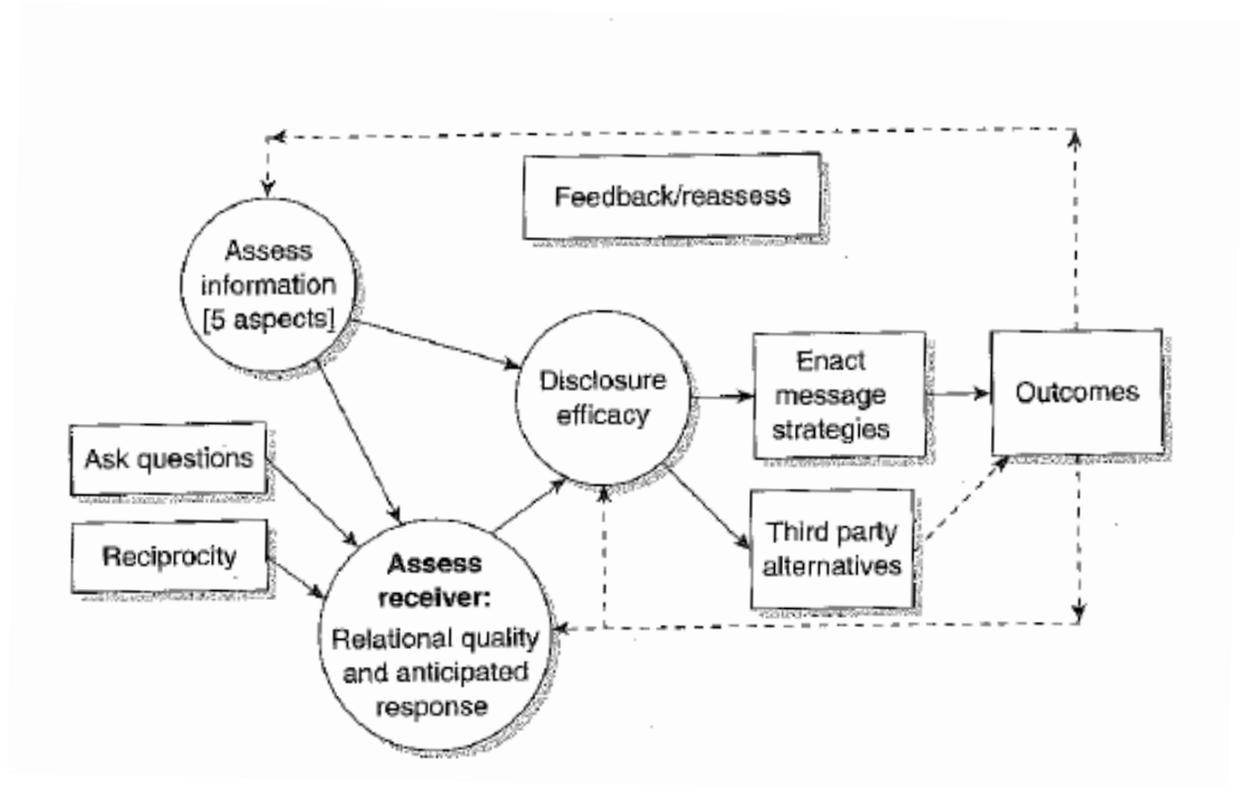
State-level nondiscrimination laws (Momentum Report, 2014, p. 11).

**APPENDIX B**

**Disclosure Decision-Making Model (DD-MM)**



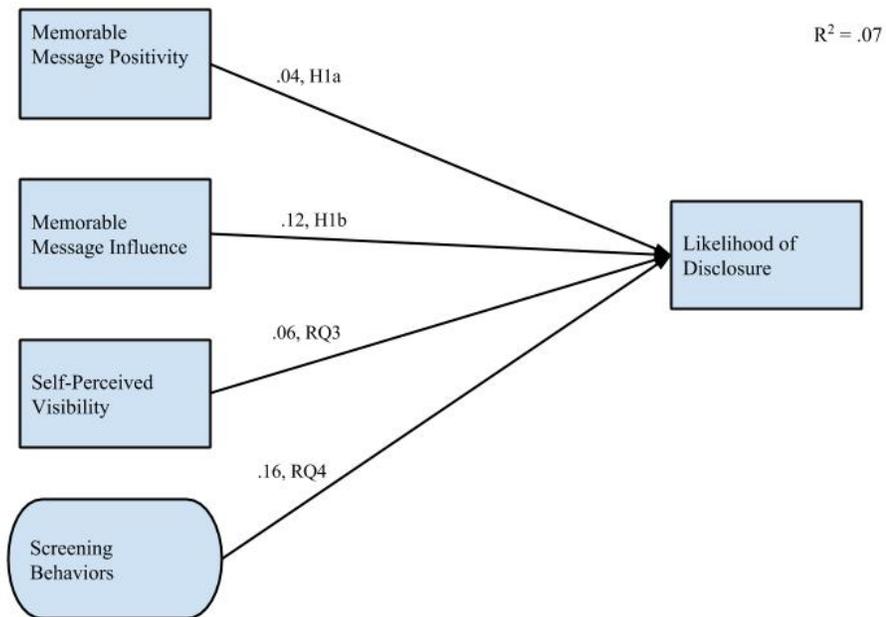
Simplified disclosure process model (Greene, 2009, p. 228)



Health disclosure decision-making model (Greene, 2009, p. 11).

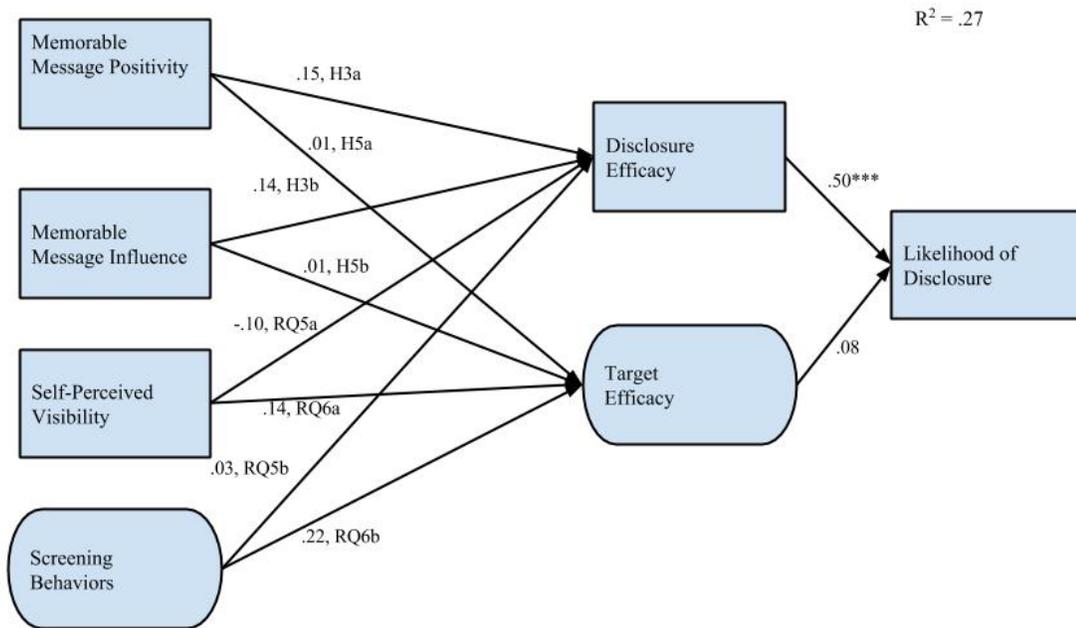
**APPENDIX C**  
Proposed and Tested Models

Figure 1: Memorable Messages Model (Updated, Hypothesized, and Tested)



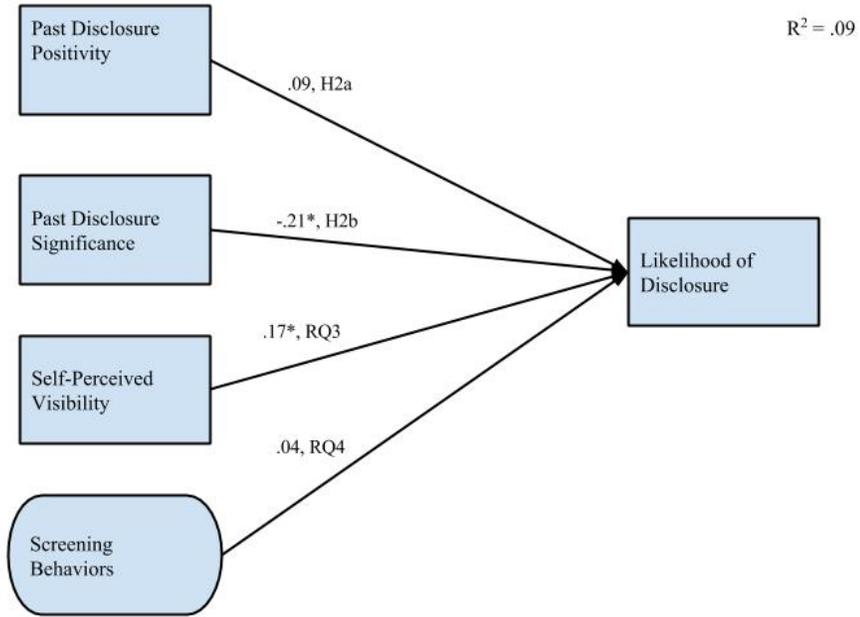
Note: \*p < .05, \*\*p < .01, \*\*\*p < .001.

Figure 2: Mediated Memorable Messages Model (Updated, Hypothesized, and Tested)



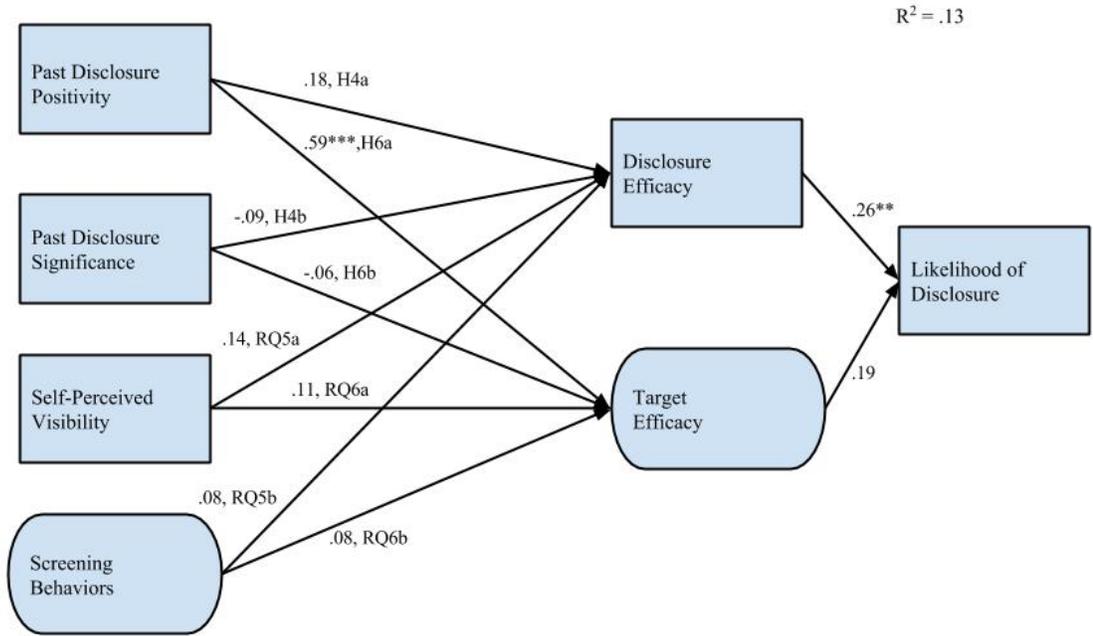
Note: \*p < .05, \*\*p < .01, \*\*\*p < .001.

Figure 3: Past Disclosures Model (Updated, Hypothesized, and Tested)



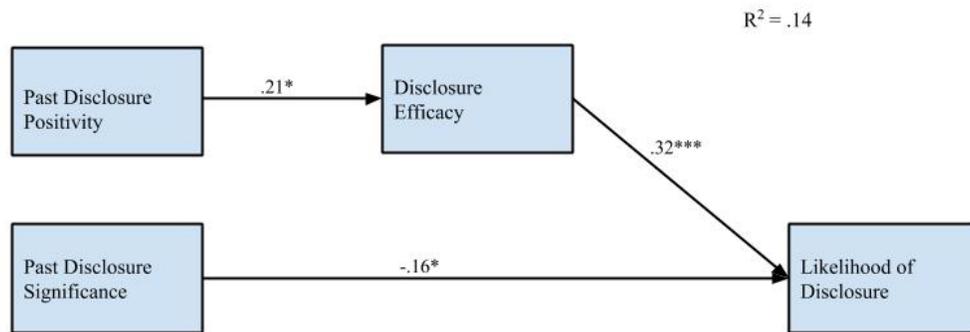
Note: \*p < .05, \*\*p < .01, \*\*\*p < .001.

Figure 4: Mediated Past Disclosures Model (Updated, Hypothesized, and Tested)



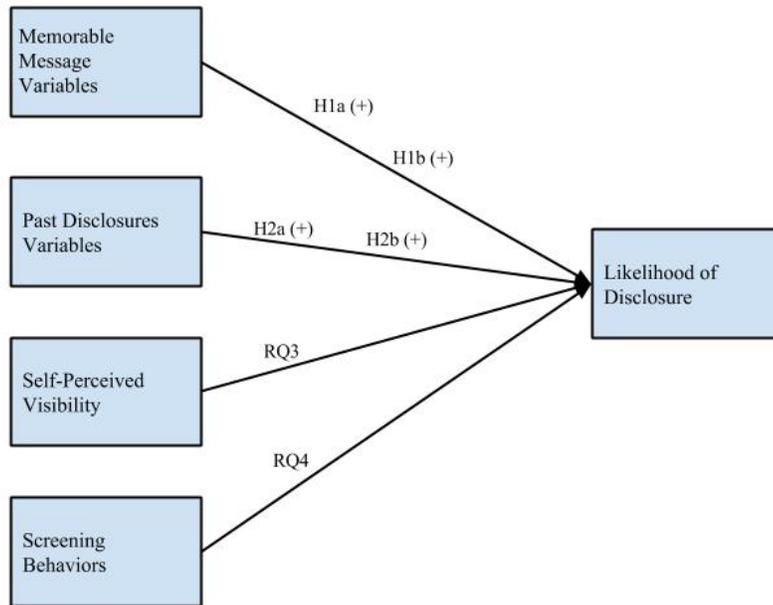
Note: \*p < .05, \*\*p < .01, \*\*\*p < .001.

Figure 5: Fitted Past Disclosures Model (Trimmed and Tested)



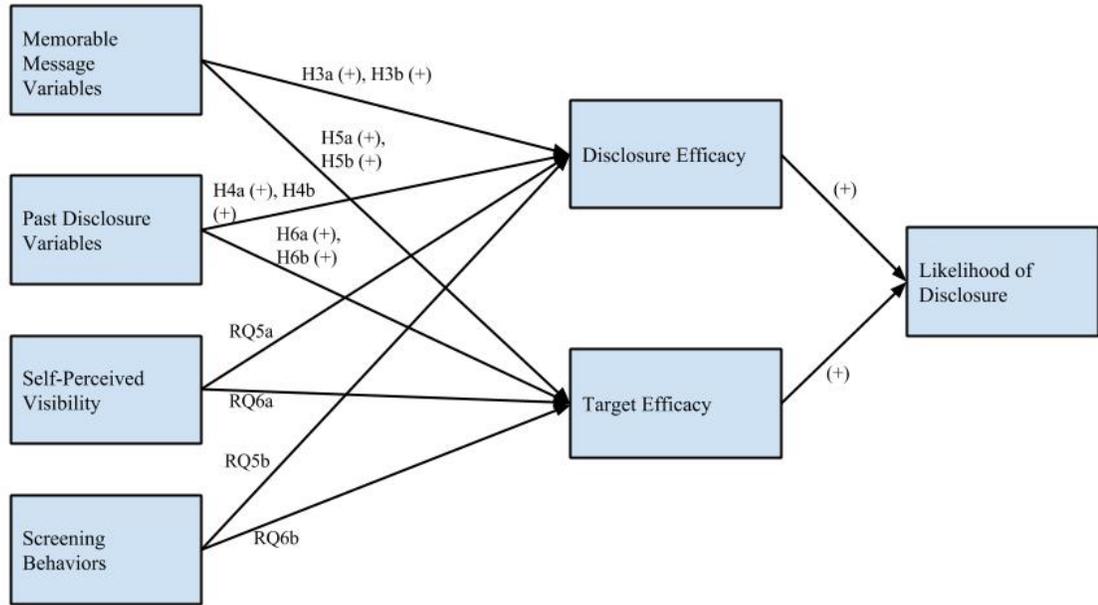
Note: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Figure 6: Originally Proposed Model, Unmediated



*Note:* Memorable message variables include positivity (H1a) and influence (H1b). Past disclosures variables include positivity (H2a) and significance (H2b).

Figure 7: Originally Proposed Model, Mediated



*Note:* Memorable message variables include positivity (H3a, H5a) and influence (H3b, H5b). Past disclosures variables include positivity (H4a, H6a) and significance (H4b, H6b).

## APPENDIX D

### Qualtrics measures

**My notes to the reader appear as bolded text; these notes were not visible to participants.**

**The consent form is the first page of the survey.**

Consent to Participate in Internet Research

Identification of Investigator and Purpose of Study

You are invited to participate in a research study, entitled “LGB Health Experiences.”

The study is being conducted by Laura Brown and the Department of Communication Studies at The University of Texas at Austin, 2504 Whitis Avenue (A1105), Austin, TX, 78712; phone 512-471-1933; email Lbrown31@utexas.edu.

The purpose of this research study is to examine your healthcare experiences. Your participation in the study will contribute to a better understanding of healthcare for lesbian, gay, and bisexual (LGB) patients. You are free to contact the investigator at the above address and phone number to discuss the study. You must be at least 18 years old and identify as LGB to participate.

If you agree to participate:

- The survey will take approximately 40 minutes of your time.
- You will complete a survey about your healthcare experiences.
- You have the option to be compensated. Upon completion of the survey, you

will have the choice to be directed to a separate survey, in which you can list your name and contact information to be entered into a drawing for a \$50 Visa gift card. For every 50 participants, one participant will be randomly selected to receive a \$50 Visa gift card.

Risks/Benefits/Confidentiality of Data

There are some possible risks of discomfort, which could cause you to feel uncomfortable, embarrassed, sad, tired, etc. There will be no costs for participating, nor will you necessarily benefit from participating. Your name and email address will not be kept during the data collection phase unless you choose to enter yourself into the gift card drawing. Your name and contact information will NOT be linked to your survey responses. A limited number of research team members will have access to the data during data collection. Identifying information will be stripped from the final dataset.

Participation or Withdrawal

Your participation in this study is voluntary. You may decline to answer any question and you have the right to withdraw from participation at any time. Withdrawal will not affect your relationship with The University of Texas in any way. If you do not want to participate either simply stop participating or close the browser window. If you do not want to receive any more reminders, you may email the researcher at

Lbrown31@utexas.edu.

Contacts

If you have any questions about the study or need to update your email address contact the researcher Laura Brown at 512-471-1933 or send an email to Lbrown31@utexas.edu. This study has been reviewed by The University of Texas at Austin Institutional Review Board and the study number is 2014-05-0115.

Questions about your rights as a research participant

If you have questions about your rights or are dissatisfied at any time with any part of this study, you can contact, anonymously if you wish, the Institutional Review Board by phone at (512) 471-8871 or email at orsc@uts.cc.utexas.edu.

If you experience any distress from this survey you may contact the Contact Crisis Help Line at 972-233-2233.

If you agree to participate, click through to begin the survey. Thank you.

Please print a copy of this document for your records.

Yes, I agree to participate. (1)

No, I do not agree to participate. (2)

If Yes Is Selected, Then Skip To Memorable messages are things people ...If Yes Is Selected, Then Skip To Memorable messages are things people ...

**Memorable messages section, measure adapted from Smith et al. (2009)**

Q6 Memorable messages are things that people said to you that 1) you remember and 2) that have had an influence on your life. Can you remember anything someone said to you about going to the doctor and your sexual orientation?

Yes (1)

No (2)

If No Is Selected, Then Skip To Imagine that you were talking with an...If Yes Is Selected, Then Skip To In the space below, please type the m...

**If participants COULD recall a memorable message about going to the doctor and sexual orientation, they answered this set of questions:**

Q7 In the space below, please describe what you remember someone telling you about going to the doctor and your sexual orientation.

[text box]

Q16 In years, how old were you when you got this message?

[text box]

Q17 Who said this to you?

[text box]

Q52 Looking back, how did this message make you feel? (Sliding scale of happy/sad faces.)

- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)

Q18 Use the slider below to answer the following question (100 = very influential and 0 = no influence at all).

\_\_\_\_\_ How influential has this message been with the way you've talked with health care providers (e.g., doctors and nurses) since then? (1)

If How influential has this me... Is Not Empty, Then Skip To A past disclosure experience is a tim...

**If participants COULD NOT recall a memorable message about going to the doctor, they answered this set of questions:**

Q36 Imagine that you were talking with a lesbian, gay, or bisexual friend. In the space below, please describe what you would say about going to the doctor and sexual orientation.

[text box]

Q37 Use the slider below to answer the following question (100 = very influential and 0 = no influence at all).

\_\_\_\_\_ How influential do you think this message would be with the way a friend would talk with health care providers (e.g., doctors and nurses) in the future? (1)

Q38 How do you think this message would make a friend feel? (Sliding scale of happy/sad faces.)

- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)

**Past disclosure experiences section, measures adapted from Afifi & Caughlin (2006) and Caughlin, Afifi, Carpenter-Theune, & Miller (2005)**

**All participants answered this question:**

Q41 A past disclosure experience is defined as a time that you chose to tell a health care provider (e.g., a doctor or a nurse) about your LGB status. Have you had any past disclosure experiences?

- Yes (1)
- No (2)

If No Is Selected, Then Skip To To answer the following questions, th...

**If participants DID have a past disclosure experience on which to report, they answered this set of questions (if participants did NOT have a past disclosure experience on which to report, they skipped ahead to the next section, Screening):**

Q42 How many past disclosure experiences have you had?

[text box]

Q87 Think back to the last time you went to the doctor. Did you tell anyone there about your sexual orientation?

- Yes (1)
- No (2)

Q43 Think about your most recent past disclosure experience. In the space below, please describe this experience.

[text box]

Q44 Who did you tell about your sexual orientation?

- Physician (1)
- Nurse (2)
- Receptionist/front office staff (3)
- Medical form (4)
- Other, please describe: (5) \_\_\_\_\_

Q45 How positive or negative was this experience?

- Extremely positive (1)
- Somewhat positive (2)
- A little positive (3)
- Neither positive nor negative (4)
- A little negative (5)
- Somewhat negative (6)
- Extremely negative (7)

Q47 How significant or insignificant was this experience?

- Extremely insignificant (1)
- Somewhat insignificant (2)
- A little insignificant (3)
- Neither significant nor insignificant (4)
- A little significant (5)
- Somewhat significant (6)
- Extremely significant (7)

Q48 How favorably or unfavorably did the person react?

- Much more unfavorably than I expected (1)
- Somewhat more unfavorably than I expected (2)
- A little more unfavorably than I expected (3)
- As expected (4)
- A little more favorably than I expected (5)
- Somewhat more favorably than I expected (6)
- Much more unfavorably than I expected (7)
- Does not apply (8)

**Screening section**

**I created this new measure based on previous research; these items were not adapted from an existing measure.**

Q49 Next, we'd like for you to think about any information that you collected before or after this doctor's visit. To answer the following questions, think back to the last time you went to the doctor. **Please see next page for the items in matrix format.**

|   | Not at all (1)        | A little (2)          | Somewhat (3)          | A lot (4)             |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| I looked for information about the provider before making an appointment. (1)                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I looked for information about the facility before making an appointment. (2)                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I looked for information about the provider after making an appointment. (3)                                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I looked for information about the facility after making an appointment. (4)                                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I looked up information on the internet about the provider or facility before going to my appointment. (5)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I gathered information from other people about the provider or facility before going to my appointment. (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I searched the internet for a recommended provider. (7)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I searched specifically for LGB-friendly providers or facilities. (8)                                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q50 To answer the following questions, we'd like you to think about future visits to the doctor.

|  | Unlikely (1)          | Somewhat unlikely (2) | Somewhat likely (3)   | Likely (4)            |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| In the future, before the next time you receive care from a health provider, how likely is it that you will search for information or recommendations online? (1)                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| In the future, before the next time you receive care from a health provider, how likely is it that you will gather information or recommendations from family, friends, or colleagues? (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q51 If the future, if you will look for information or recommendations, how will you do it? Please be as specific as possible.

[text box]

**Visibility section**

**I created this new measure based on previous research; these items were not adapted from an existing measure.**

Q52 Please answer the following questions.

|   | Disagree (1)          | Somewhat disagree (2) | Somewhat agree (3)    | Agree (4)             |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| I think other people can tell that I am not heterosexual just by looking at me. (1)               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I think other people can tell that I am not heterosexual just by listening to me speak. (2)       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I intentionally try to communicate my LGB status nonverbally (e.g., clothes, hairstyle, etc.) (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| No one would know about my LGB status if I didn't explicitly tell them. (4)                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| It is important to me to be recognized as LGB by other LGB individuals. (5)                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**Disclosure efficacy section. Afifi & Steuber's (2009) communication efficacy scale, adapted from Afifi & Caughlin's (2006) larger scale.**

**Q86 Please answer the following questions. (See following page for questions in matrix format.)**

|  | Strongly agree (1)    | Somewhat agree (2)    | Agree a little (3)    | Neither agree nor disagree (4) | Disagree a little (5) | Somewhat disagree (6) | Strongly disagree (7) |
|--|-----------------------|-----------------------|-----------------------|--------------------------------|-----------------------|-----------------------|-----------------------|
| I wouldn't know what to say if I tried to tell my doctor or other healthcare professional about my sexual orientation. (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I wouldn't even know how to begin telling this person my sexual orientation. (2)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I can't think of any way to tell my doctor or other healthcare professional the information. (3)                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I don't even know how to approach the issue with my doctor or other healthcare professional. (4)                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**Target efficacy section**

**I created this new measure based on previous research; these items were not adapted from an existing measure.**

Q54 To answer the following questions, please think about your most recent experience at the doctor's office. "Provider" means whoever you met with at your doctor's appointment.

|  | Not at all (1)        | A little (2)          | Somewhat (3)          | Very much (4)         |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| How attentive was this provider? (1)               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How professionally skillful was this provider? (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How empathetic was this provider? (3)              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How reassuring was this provider? (4)              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How supportive was this provider? (5)              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How responsive was this provider? (6)              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How judgmental was this provider? (7)              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How positive was this provider? (8)                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How friendly was this provider? (9)                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How courteous was this provider? (10)              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How informative was this provider? (11)            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**Disclosure section**

**I created this new measure based on previous research; these items were not adapted from an existing measure.**

Q55 Use the slider below to answer the following question (100 = extremely likely and 0 = not likely at all).

\_\_\_\_\_ In the near future, how likely is it that you would tell your sexual orientation to a doctor, a nurse, a receptionist/front office staff member, or on a medical form? (1)

Q73 Please indicate how **LIKELY** you would be to tell your sexual orientation to the following (where 100 = extremely likely and 0 = not at all likely):

- \_\_\_\_\_ Doctor (1)
- \_\_\_\_\_ Nurse (2)
- \_\_\_\_\_ Receptionist/front office staff (3)
- \_\_\_\_\_ Medical form (4)

Q77 Please indicate how **DIRECT** you would be about your sexual orientation to the following (where 100 = extremely direct and 0 = extremely indirect):

- \_\_\_\_\_ Doctor (1)
- \_\_\_\_\_ Nurse (2)
- \_\_\_\_\_ Receptionist/front office staff (3)
- \_\_\_\_\_ Medical form (4)

Q78 Please indicate how **LONG** your message about your sexual orientation would be to the following (where 100 = extremely long and 0 = extremely short):

- \_\_\_\_\_ Doctor (1)
- \_\_\_\_\_ Nurse (2)
- \_\_\_\_\_ Receptionist/front office staff (3)
- \_\_\_\_\_ Medical form (4)

Q79 Please indicate how much **DETAIL** you would include about your sexual orientation to the following (where 100 = very much detail and 0 = no details):

- \_\_\_\_\_ Doctor (1)
- \_\_\_\_\_ Nurse (2)
- \_\_\_\_\_ Receptionist/front office staff (3)
- \_\_\_\_\_ Medical form (4)

Q88 Sometimes people avoid talking about sexual orientation at the doctor's office. Please indicate how **LIKELY** you would be to **AVOID** the topic of the your sexual orientation with each of the following (where 100 = extremely likely and 0 = not at all likely):

- \_\_\_\_\_ Doctor (1)
- \_\_\_\_\_ Nurse (2)
- \_\_\_\_\_ Receptionist/front office staff (3)
- \_\_\_\_\_ Medical form (4)

Q89 Sometimes people lie about their sexual orientation at the doctor's office. Please indicate how LIKELY you would be to LIE about your sexual orientation to each of the following (where 100 = extremely likely and 0 = not at all likely):

- \_\_\_\_\_ Doctor (1)
- \_\_\_\_\_ Nurse (2)
- \_\_\_\_\_ Receptionist/front office staff (3)
- \_\_\_\_\_ Medical form (4)

**Disclosure items adapted from Derlega, Winstead, Greene, Serovich, & Elwood (2002)**

Q90 Indicate how much each statement would influence your decision to tell or not tell your sexual orientation at the doctor's office. (See matrix of items on next page.)

|  | Not at all important<br>(1) | Slightly important<br>(2) | Moderately important (3) | Very important<br>(4) | Extremely important<br>(5) |
|--|-----------------------------|---------------------------|--------------------------|-----------------------|----------------------------|
| I would want to be able to get the information off my chest. (1) | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>      |
| I wouldn't want to risk any health problems. (2)                 | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>      |
| Health providers have a right to know the information. (3)       | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>      |
| I would feel a sense of duty to tell. (4)                        | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>      |
| I would want to educate providers about it. (5)                  | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>      |

|  |                       |                       |                       |                       |                       |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <p>I would want to make sure my provider understood the seriousness of this information. (6)</p>   | <input type="radio"/> |
| <p>I would want to see how my provider would react when I told him or her the information. (7)</p> | <input type="radio"/> |
| <p>I would trust my provider. (8)</p>  | <input type="radio"/> |
| <p>My provider could be of help. (9)</p>   | <input type="radio"/> |
| <p>My provider and I would have a lot in common. (10)</p>  | <input type="radio"/> |

**Non-disclosure items adapted from Derlega, Winstead, Greene, Serovich, & Elwood (2002)**

Q91 Indicate how much each statement would influence your decision to tell or not tell your sexual orientation at the doctor's office.

|   | Not at all important<br>(1) | Slightly important<br>(2) | Moderately important (3) | Very important<br>(4) | Extremely important<br>(5) |
|---|-----------------------------|---------------------------|--------------------------|-----------------------|----------------------------|
| Information about my sexual orientation is my own private information. (1)              | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>      |
| Some people have big mouths and my provider might go running around telling people. (2) | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>      |
| I don't have to tell my provider if I don't want to. (3)                                | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>      |
| I had difficulty accepting that I was LGB. (4)  | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>      |
| I just wouldn't be able to figure out how to talk about it. (5)                         | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>      |

|   |                       |                       |                       |                       |                       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I wouldn't feel that my provider would be supportive. (6) | <input type="radio"/> |
| I wouldn't want my provider to worry about me. (7)        | <input type="radio"/> |
| My provider and I aren't very close to one another. (8)   | <input type="radio"/> |

**Stigma consciousness section, Pinel's (1999) questionnaire.**

Q56 Please answer the following questions.

**Please see the next page for items in matrix format.**

|  | Strongly disagree<br>(1) | Disagree<br>(2)       | Somewhat disagree<br>(3) | Neither Agree nor Disagree<br>(4) | Somewhat agree (5)    | Agree (6)             | Strongly Agree (7)    |
|--|--------------------------|-----------------------|--------------------------|-----------------------------------|-----------------------|-----------------------|-----------------------|
| Stereotypes about LGB people have not affected me personally. (1)  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I never worry that my behaviors will be viewed as stereotypical of LGB people. (2)   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When interacting with heterosexuals who know of my sexual preference and/or identity, I feel like they interpret all my behaviors in terms of the fact that I am a LGB person. (3) | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Most heterosexuals do not judge LGB people on the basis of their sexual preference. (4)  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

|   |                       |                       |                       |                       |                       |                       |                       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <p>My being an LGB person does not influence how LGB people act with me. (5)</p>                          | <input type="radio"/> |
| <p>I almost never think about the fact that I am a LGB person when I interact with heterosexuals. (6)</p> | <input type="radio"/> |
| <p>My being a LGB person does not influence how people act with me. (7)</p>                               | <input type="radio"/> |
| <p>Most heterosexuals have a lot more homophobic thoughts than they actually express. (8)</p>             | <input type="radio"/> |
| <p>I often think that heterosexuals are unfairly accused of being homophobic. (9)</p>                     | <input type="radio"/> |
| <p>Most heterosexuals have a problem viewing LGB people as equals. (10)</p>                               | <input type="radio"/> |

**Demographic information**

Q57 In what year were you born?

[text box]

Q65 What is your gender?

- Woman (1)
- Man (2)
- Transgender (3)
- Other/please describe: (4) \_\_\_\_\_

Q66 How do you identify?

- Lesbian (1)
- Gay (2)
- Bisexual (3)
- Queer (4)
- Other/please describe: (5) \_\_\_\_\_

Q58 What is your race/ethnicity?

[text box]

Q59 In feet and inches, what is your height?

Feet (1)

Inches (2)

Q60 In pounds, what is your weight?

[text box]

Q61 On average, how many cigarettes do you smoke per week?

- 0 cigarettes (1)
- 1-20 cigarettes (2)
- 21-99 cigarettes (3)
- 100 or more cigarettes (4)

Q62 On average, how many alcoholic beverages (e.g., beer, wine, cocktails) do you drink per week?

- 0 beverages (1)

- 1-5 beverages (2)
- 6-12 beverages (3)
- 13 or more beverages (4)

Q63 Do you use or consume other drugs recreationally (e.g., marijuana, ecstasy)?

- Yes (1)
- No (2)

Q64 What is your relationship status?

- Single (1)
- Single and dating (2)
- Partnered (3)
- Domestic partnership (4)
- Civil union (5)
- Married (6)
- Other/please describe: (7) \_\_\_\_\_

Q67 What is your employment status?

- Part-time employee (1)
- Full-time employee (2)
- Part-time student (3)
- Full-time student (4)
- Retired (5)
- Other/please describe: (6) \_\_\_\_\_

Q68 What is your insurance status?

- I have my own health insurance. (1)
- I am on someone else's health insurance. What is the nature of your relationship? This person is my \_\_\_\_\_ (e.g., mother). (2) \_\_\_\_\_
- In the past year, I have sometimes had health insurance, and I have it now. (3)
- In the past year, I have sometimes had health insurance, and I do not have it now. (4)
- In the past year, I have not had any health insurance. (5)

Q69 What was your approximate income in 2013?

- < 15,000 (1)
- 16,000 - 25,000 (2)
- 26,000 - 40,000 (3)
- 41,000 - 60,000 (4)
- 61,000 - 90,000 (5)
- > 100,000 (6)

Q70 Which of the following best represents your level of education?

- High school diploma or GED (1)
- Some college completed (2)
- Undergraduate degree (e.g., BA) (3)
- Graduate or professional degree (4)
- Other/please describe: (5) \_\_\_\_\_

Q71 Please indicate the PERCENTAGE of friends, family, and co-workers who know your sexual orientation (e.g., 20%, 70%).

- \_\_\_\_\_ Friends (1)
- \_\_\_\_\_ Family (2)
- \_\_\_\_\_ Co-workers (3)

Q72 Do you live in the greater Austin, Texas area?

Yes (1)

No, I live in/near: (2) \_\_\_\_\_

**This is the last page of the survey, to which all participants were be directed.**

Q53 Thank you for completing the survey. Now you have the option to enter your name for a \$50 Visa gift card drawing. Your chances of randomly winning the gift card are approximately 1/50. Do you want to enter the drawing?

- Yes, I want to enter the drawing. Click this link to enter the drawing:  
[http://utexascomms.qualtrics.com/SE/?SID=SV\\_9YPy3voqYQJYcn3](http://utexascomms.qualtrics.com/SE/?SID=SV_9YPy3voqYQJYcn3) (1)
- No, I do not want to enter the drawing. (2)

If No, I do not want to enter ... Is Selected, Then Skip To End of Survey

**\*\*If participants wished to enter the drawing, they were directed to an entirely separate questionnaire, which did not link their identifying information with their survey responses. This questionnaire/form is here:**

Health Questionnaire Drawing

Q1 Please fill in the following information for a chance to win a \$50 Visa gift card. Your information is NOT linked to your survey responses.

First and last name (1)

Email address (2)

Address line 1 (3)

Address line 2 (4)

## APPENDIX E

### IRB Application and Approval Letter

1. Title  
Modeling Lesbian, Gay, and Bisexual Patient Disclosure
2. Principal Investigator: Dr. Erin E. Donovan, ED6243, Department of Communication Studies

Co-investigator: Laura E. Brown, Doctoral Candidate, LB25876, Department of Communication Studies

3. Purpose

As lesbian, gay, and bisexual (LGB) issues like marriage equality have garnered national attention, other issues facing the LGB population remain obscured. HealthyPeople 2020, a federally funded healthcare initiative, recently shed light on some of those issues by identifying discrimination and social stigma as factors having a negative impact on LGB health outcomes. In other words, we are beginning to recognize that LGB people are not as healthy as their heterosexual counterparts. My interpersonal health communication research is founded on the assumption that health disparities are created and experienced, in part, through LGB patients' communication with their healthcare providers. By studying communicative strategies and patterns in healthcare contexts, we can begin to address the gap between heterosexual and LGB health outcomes.

Although the LGB population is highly variable in terms of socioeconomic status, age, and geographic location, all LGB individuals must confront a similar double bind within healthcare contexts: "Should I disclose my sexual minority status and risk discrimination or stigmatization by my healthcare provider, or should I conceal my sexual minority status and risk not receiving quality medical care that is tailored to my needs?" In other words, LGB patients must decide in each instance whether to disclose their sexual identity to their healthcare providers, and this decision represents a significant source of stress for the LGB individual. Drawing on existing disclosure research, and the Health Disclosure Decision-Making Model (Greene, 2009) in particular, I plan to utilize new and existing measures to investigate and model the ways in which communication strategies may facilitate (or hinder) the use of healthcare services by LGB patients. My study is guided by the following research questions:

- RQ1: How do memorable messages influence disclosure decisions?
- RQ2: How do past disclosure experiences influence disclosure decisions?
- RQ3: How does perceived visibility of sexual minority status influence disclosure decisions?
- RQ4: How do participant screening behaviors influence disclosure decisions?

RQ5: Does self-efficacy mediate the relationships in RQ1-RQ4?

RQ6: Does target (provider)-efficacy mediate the relationships in RQ1-RQ4?

#### 4. Procedures

This study will use an online survey, created in *Qualtrics*, to explore the role of memorable messages, past experiences, perceived visibility, screening behaviors, and efficacy in order to model LGB patient disclosures. Participants will respond to items regarding each of these variables and demographic questions. Participants can skip any questions they do not wish to answer. Participants will be recruited through a variety of sources, and then encouraged to share the survey link with other potential participants (i.e., using the snowball sampling technique). Using an online survey is beneficial since participants are less likely to experience fatigue from taking the survey online rather than taking the survey in a pencil and paper format. Privacy and confidentiality are also better ensured since there are no hard copies of responses that can be lost (which is especially important in this case since participants will be answering questions about a topic that may be sensitive). Statistical analysis of the data will use structural equation modeling, or path analysis, which shares commonalities with regression procedures. Statistical software packages on password-protected computers will be used to conduct the quantitative analyses. Responses to open-ended questions will be analyzed through open coding and thematic analysis.

Participants will be able to access the survey via a *Qualtrics* link, and will be immediately directed to the online consent form, which contains information about participant rights, the purpose of the study, and the researcher's contact information. After clicking to give consent, participants will be directed to the online survey, which will take approximately 40 minutes to complete. Participants can complete this survey from any location that has internet access. Upon completion, participants can choose to be directed to a separate survey where they can list their name and contact information (which will not be linked to their responses), if they want to be entered in a gift card drawing.

##### a. Location

Survey data collected from participants will be gathered through the use of an online survey website (Qualtrics.com). Therefore, participants can access the survey at any destination of their choosing that has internet access. The researcher expects that participation will not require more than 40 minutes of time.

##### b. Resources

I will use personal funds to support this research, in the form of gift card drawings (which is optional for participants to sign up for).

##### c. Study Timeline

Data collection for this project will begin as soon as IRB approval is granted. Data collection will cease, at the very latest, 1 year from the time of IRB approval. Preliminary results could be presented as early as November 2014 and throughout the following 5 years.

## 5. Measures

The survey has been uploaded as a separate document in IRBaccess. The following section outlines and summarizes the variables and measures:

*Memorable messages variable.* Following Smith and colleagues (2009), this adapted measure will ask participants to provide memorable messages that they have received about receiving healthcare and their sexual orientation status (or a message they would give to someone else if they cannot recall a memorable message themselves). Then, participants will respond to some quantitative items regarding the message on which they've reported.

*Past experiences variable.* This measure was created for the purposes of the current project, however, it draws heavily from existing research and measures. The measures used here are adapted from studies regarding secrets in personal relationships (Afifi & Caughlin, 2006; Caughlin, Afifi, Carpenter-Theune, & Miller, 2005).

*Screening variable.* This quantitative measure was created for the purposes of the current project, however, it draws heavily from existing research. Boehmer and Case (2004) studied disclosure of sexual orientation to physicians among women with breast carcinoma. Through in-depth qualitative interviews, the researchers captured ways that patients screen providers before making a disclosure decision. This quantitative measure is adapted from the qualitative results of Boehmer and Case's (2004) study.

*Perceived visibility variable.* This quantitative measure was created for the purposes of the current project, however, it draws heavily from existing research. Lasser and Tharinger (2003) conducted in-depth qualitative interviews with teens about how they managed their identities as sexual minorities. The current measure draws from Lasser and Tharinger's (2003) results.

*Self-efficacy variable.* This is an existing quantitative measure that is composed of four items, following Afifi and Steuber's (2009) work on disclosure and communication efficacy. The scale has illustrated good reliability and validity. The language has been adapted for the healthcare context.

*Target efficacy variable.* This quantitative measure was created for the purposes of the current study and draws from Greene's (2009) and Dindia's (1998) research which shows that assessing the receiver of a disclosure depends on relational quality, anticipated response, and target characteristics.

*Disclosure variable.* Here, the researcher blended an adaptation of an existing measure with a few new questions based on previous research in this area (e.g., Greene, Derlega, & Mathews, 2006). Following these items, participants will respond to an adapted (shortened, some language changed for health and identity context) Reasons For and Against HIV Disclosure measure (Derlega, Winstead, Greene, Serovich, & Elwood, 2002).

*Control variable.* The Stigma Consciousness Questionnaire (SCQ) will be used as a control variable (Pinel, 1999). The SCQ contains ten quantitative items regarding how participants think about their sexual orientation and perceptions of their sexual orientation.

*Demographic information.* Finally, at the end of the survey, participants will be asked to respond to a variety of questions regarding demographic information like age, general health information (e.g., smoking status), education, and income.

## 6. Participants

### a. Target Population

I plan to collect data from at least 200 individuals who are over the age of 18 who identify as lesbian, gay, or bisexual. My broad goal is to work towards reducing health disparities that exist for LGB people living in the United States.

### b. Inclusion/Exclusion

Because the study seeks to describe how LGB patients manage disclosure decisions with their healthcare providers, the following criteria must be met for participation: 1) individuals must be over the age of 18; 2) individuals must identify as lesbian, gay, or bisexual. Health insurance status, relationship status, and state of residence are not criteria, and the researcher does not expect any participants to be vulnerable to coercion or undue influence. The researcher expects human subject involvement in this project to begin upon IRB approval and end one year after that date (at the very latest).

### c. Benefits

Given the motivations and goals behind this study, the insights derived from this project pose no greater risks than the minimal risks potentially associated with interview prompts and questionnaire items. Data from this study will allow for a better understanding of how LGB individuals manage sexual orientation disclosure decisions in healthcare contexts. Benefits for the participant include gaining insight into their own health experiences and life experiences and how those experiences promote or hinder use of healthcare services. The items in this study may also spark individual reflection given that participants are encouraged to think about communication and their own experiences. Participants can also be confident that they are contributing to a growing body of scientific and social scientific knowledge about LGB health disparities and communication. Finally, society in general may benefit from this work. Data may be used to inform health policies, guidelines for physician-patient communication, and inform new legislation about LGB healthcare in the United States.

### d. Risks

There are no foreseeable risks for participating in this study. The data will be collected anonymously, and confidentiality will be maintained. However, if psychological distress does occur, the phone number for the Contact Crisis Help Line (972-233-2233) will be provided on the consent form so that any individual taking part in the study will be able to seek assistance if needed.

### e. Recruitment

Participants will be recruited from a variety of places, both online and offline. Participants will be encouraged to pass along the survey link to other potential participants (i.e., the snowball sampling technique). The researcher will post information

- about the study as well as the study link on her social media pages (e.g., Facebook), Craigslist, listservs such as UT Know Events and CRTNET, and send emails to those who she believes could be participants for the study. The researcher will also post flyers around campus in designated areas (with permission) and post flyers around Austin (in designated areas, with permission from retailers and others).
- f. **Obtaining Informed Consent**  
Before beginning the online survey, participants will be presented with an online/electronic cover letter on the first page of the Qualtrics.com site. This will include information about the study and the investigator, and will also contain an uploaded consent document (see attached consent form). Participants will have to agree to the conditions of the consent form before proceeding to the survey. All participants must be at least 18 years old and identify as LGB, and will be required to read through the explanatory and instructional information before beginning the online survey. An individual will be made aware that his or her decision to partake in the study designates his or her informed consent.

7. **Privacy and Confidentiality**

This study will collect anonymous subject data from the Qualtrics.com survey site. When I set up the Qualtrics survey, I will click on "Anonymize Responses." Participants will not be asked to provide any other identifying material other than the option to provide their names and contact information if they wish to be entered in a gift card drawing. Names and contact information will be collected separately from survey responses (i.e., responses and identifying information will not be linked). No hard copies of responses will be collected so there is not a concern that responses will be lost or misplaced. After responses are downloaded, the electronic data will be kept secure on the investigator's password-protected computer. Only the investigator will see the names of participants who chose to enter themselves in the gift card drawing. After the drawing is completed, this file containing identifying information will be permanently deleted. Data will not be shared outside of professional presentations and publications; only the investigator will have access to the data.

**Confidentiality of the Data or Samples**

- a. In terms of confidentiality for the online survey respondents, data collection procedures of the current study ensure that the security and confidentiality of research will be maintained since responses will be gathered through Qualtrics.com. No hard copies of responses will be collected, so there is not a concern that responses will be lost or misplaced.
- b. Only the investigator will be able to see participant's names, should they wish to enter themselves in the optional gift card drawing.
- c. The data (excluding names and contact information) will be kept for a maximum of 10 years. The separately collected names and contact information will be kept until the gift card drawing is complete.

- d. The data (participant responses) will be kept anonymous. Contact information (which is not at all linked to participant responses) will be kept confidential. The researcher does not anticipate that the data will be shared by other researchers for research purposes not detailed in this study, however, if this becomes a possibility in the future, the researcher will notify the IRB for approval.
- e. The confidential contact information will be destroyed by deleting all relevant files upon completion of the gift card drawing. The anonymous data will be destroyed after a maximum of 10 years by deleting all relevant files.

8. Compensation

At the conclusion of the study, participants will have the option to be directed to a separate survey where they can enter a drawing for a \$50 Visa gift card. If participants choose to enter themselves in the gift card drawing, they will be asked to provide their first and last name, an email address, and a mailing address. For every 50 participants who enter the drawing, one participant will be randomly chosen to receive a \$50 Visa gift card.

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**OFFICE OF RESEARCH SUPPORT**

**THE UNIVERSITY OF TEXAS AT AUSTIN**

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*P.O. Box 7426, Austin, Texas 78713 · Mail Code A3200  
(512) 471-8871 · FAX (512) 471-8873*

FWA # 00002030

Date: 06/13/14

PI: Erin Eileen Donovan

Dept: Communication Studies

Title: Modeling Lesbian, Gay, and Bisexual Patient Disclosure

Re: IRB Exempt Determination for Protocol Number 2014-05-0115

Dear Erin Eileen Donovan:

Recognition of Exempt status based on 45 CFR 46.101(b)(2).

Qualifying Period: 06/13/2014 to 06/12/2017. *Expires 12 a.m. [midnight] of this date.*  
A continuing review report must be submitted in three years if the research is ongoing.

**Responsibilities of the Principal Investigator:**

Research that is determined to be Exempt from Institutional Review Board (IRB) review is not exempt from ensuring protection of human subjects. The following criteria to protect human subjects must be met. The Principal Investigator (PI):

1. Assures that all investigators and co-principal investigators are trained in the ethical principles, relevant federal regulations, and institutional policies governing human subject research.
2. Will provide subjects with pertinent information (e.g., risks and benefits, contact information for investigators and IRB Chair) and ensures that human subjects will voluntarily consent to participate in the research when appropriate (e.g., surveys, interviews).
3. Assures the subjects will be selected equitably, so that the risks and benefits of the research are justly distributed.
4. Assures that the IRB will be immediately informed of any information or unanticipated problems that may increase the risk to the subjects and cause the category of review to be reclassified to expedited or full board review.
5. Assures that the IRB will be immediately informed of any complaints from subjects regarding their risks and benefits.

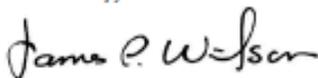
6. Assures that confidentiality and privacy of the subjects and the research data will be maintained appropriately to ensure minimal risks to subjects.
7. Will report, by amendment, any changes in the research study that alter the level of risk to subjects.

These criteria are specified in the PI Assurance Statement that was signed before determination of exempt status was granted. The PI's signature acknowledges that they understand and accept these conditions. Refer to the Office of Research Support (ORS) website [www.utexas.edu/irb](http://www.utexas.edu/irb) for specific information on training, voluntary informed consent, privacy, and how to notify the IRB of unanticipated problems.

1. Closure: Upon completion of the research study, a Closure Report must be submitted to the ORS.
2. Unanticipated Problems: Any unanticipated problems or complaints must be reported to the IRB/ORS immediately. Further information concerning unanticipated problems can be found in the IRB Policies and Procedure Manual.
3. Continuing Review: A Continuing Review Report must be submitted if the study will continue beyond the three year qualifying period.
4. Amendments: Modifications that affect the exempt category or the criteria for exempt determination must be submitted as an amendment. Investigators are strongly encouraged to contact the IRB Program Coordinator(s) to describe any changes prior to submitting an amendment. The IRB Program Coordinator(s) can help investigators determine if a formal amendment is necessary or if the modification does not require a formal amendment process.

If you have any questions contact the ORS by phone at (512) 471-8871 or via e-mail at [orssc@uts.cc.utexas.edu](mailto:orssc@uts.cc.utexas.edu).

Sincerely,



James Wilson, Ph.D.  
Institutional Review Board Chair

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