Individual and Partner Characteristics Associated with Genital Herpes Disclosure and the Relationship between Disclosure Outcomes, Rejection, and Future Intentions to Disclose

Jaime L. Myers
University of South Florida, jaimelmyers@gmail.com

Follow this and additional works at: https://scholarcommons.usf.edu/etd
Part of the Public Health Commons

Scholar Commons Citation

This Dissertation is brought to you for free and open access by the Graduate School at Scholar Commons. It has been accepted for inclusion in Graduate Theses and Dissertations by an authorized administrator of Scholar Commons. For more information, please contact scholarcommons@usf.edu.
Individual and Partner Characteristics Associated with Genital Herpes Disclosure and the Relationship between Disclosure Outcomes, Rejection, and Future Intentions to Disclose

by

Jaime L. Myers

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy
Department of Community and Family Health
College of Public Health
University of South Florida

Major Professor: Eric Buhi, Ph.D.
Stephanie Marhefka, Ph.D.
Ellen Daley, Ph.D.
Robert Dedrick, Ph.D.

Date of Approval:
June 30, 2014

Keywords: self-disclosure, interpersonal relationships, herpes simplex virus, stigma

Copyright © 2014, Jaime L. Myers
Dedication

I would like to dedicate this dissertation study to my mother, who has always stressed the importance of education and encouraged me to achieve at the highest level possible. I know she is one of the primary reasons that this became a reality.

Additionally, I would like to thank my father for the constant love and support he provided throughout this process, as it was indispensable for actually achieving this goal. Sometimes you just need someone to listen.
Acknowledgments

I would like to thank the Department of Community and Family Health for offering the CFH Research award, which allowed me to conduct this research.

I would also like to thank numerous people in the Department of Community and Family Health for their help and encouragement. First, I would like to thank my doctoral committee, Drs. Ellen Daley, Stephanie Marhefka, and Robert Dedrick, and especially my major professor, Dr. Eric Buhi, for their guidance through this dissertation process. Your positivity and encouragement throughout has made this far more rewarding. I would also like to thank my fellow students, both current and past, for their practical help in pretesting my instrument and distributing my survey, as well as acting as a sounding board whenever I needed advice.

Finally, I would like to thank Dr. Carla VandeWeerd. Beyond giving me the opportunity to grow through working with her, she has provided essential mentorship throughout my doctoral program outside of the dissertation process that has allowed me to develop into the independent researcher I am today.
# Table of Contents

List of Tables .......................................................................................................................... iii

List of Figures ............................................................................................................................ iv

Abstract ..................................................................................................................................... v

Introduction ................................................................................................................................. 1
  Purpose ...................................................................................................................................... 1
  Dissertation Format .................................................................................................................... 1

Comprehensive Literature Review ............................................................................................ 2
  Sexually Transmitted Infections ............................................................................................... 2
  Genital Herpes .......................................................................................................................... 2
  Public Health Strategies .......................................................................................................... 6
  Disclosure in the Broader STI Literature ............................................................................... 11
    Appropriate Parallels to Genital Herpes ............................................................................... 12
  Genital Warts and Genital Herpes Disclosure ....................................................................... 14
    Psychosocial Impact ............................................................................................................. 14
    Disclosure .............................................................................................................................. 17

Weaknesses of Disclosure in Herpes Prevention ................................................................. 22

Methodological Considerations ............................................................................................... 23
  Sample ...................................................................................................................................... 23
  Design ...................................................................................................................................... 24
  Data Collection ......................................................................................................................... 25
  Measures .................................................................................................................................. 30
  Pilot Testing .............................................................................................................................. 32

Primary Gaps in the Existing Literature ............................................................................. 35

Research Questions .................................................................................................................. 36

Significance ................................................................................................................................. 37

Theoretical Approach ................................................................................................................ 39
  Theoretical Conceptualization ............................................................................................... 39

Prior Stigma Theory Applications ......................................................................................... 41

Study Application ...................................................................................................................... 42

Terms .......................................................................................................................................... 43

Definitions ................................................................................................................................. 43

Terminology Applications ......................................................................................................... 43
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associations between Individual and Relationship Characteristics and Genital Herpes Disclosure</td>
<td>44</td>
</tr>
<tr>
<td>Abstract</td>
<td>44</td>
</tr>
<tr>
<td>Background</td>
<td>44</td>
</tr>
<tr>
<td>Purpose</td>
<td>48</td>
</tr>
<tr>
<td>Methods</td>
<td>49</td>
</tr>
<tr>
<td>Participants and Procedures</td>
<td>49</td>
</tr>
<tr>
<td>Sample Demographics</td>
<td>50</td>
</tr>
<tr>
<td>Instrumentation</td>
<td>50</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>54</td>
</tr>
<tr>
<td>Results</td>
<td>55</td>
</tr>
<tr>
<td>Discussion</td>
<td>57</td>
</tr>
<tr>
<td>Tables and Figures</td>
<td>64</td>
</tr>
<tr>
<td>Genital Herpes Disclosure: Outcomes, Rejection, and Future Intentions to Disclose</td>
<td>69</td>
</tr>
<tr>
<td>Abstract</td>
<td>69</td>
</tr>
<tr>
<td>Introduction</td>
<td>69</td>
</tr>
<tr>
<td>Methods</td>
<td>72</td>
</tr>
<tr>
<td>Participants and Procedures</td>
<td>72</td>
</tr>
<tr>
<td>Instrumentation</td>
<td>73</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>74</td>
</tr>
<tr>
<td>Results</td>
<td>75</td>
</tr>
<tr>
<td>Discussion</td>
<td>77</td>
</tr>
<tr>
<td>Tables and Figures</td>
<td>84</td>
</tr>
<tr>
<td>Conclusion</td>
<td>88</td>
</tr>
<tr>
<td>Theoretical Implications</td>
<td>91</td>
</tr>
<tr>
<td>Strengths and Weaknesses</td>
<td>92</td>
</tr>
<tr>
<td>Summary</td>
<td>95</td>
</tr>
<tr>
<td>List of References</td>
<td>97</td>
</tr>
<tr>
<td>Appendix A: Questionnaire</td>
<td>112</td>
</tr>
<tr>
<td>Appendix B: Institutional Review Board Approval</td>
<td>142</td>
</tr>
</tbody>
</table>
List of Tables

Table 1: Demographic characteristics of the sample (N = 93) ........................................... 64

Table 2: Bivariate comparisons of individual and partner characteristics with disclosure at last sex .................................................................................................................. 65

Table 3: Reasons for disclosure and non-disclosure with one’s last sexual partner ............. 67

Table 4: Sample demographics ...................................................................................................... 84

Table 5: Partner reactions at last disclosure ................................................................................... 86
List of Figures

Figure 1: Disclosure timing among those who disclosed .............................................. 68

Figure 2: Expectations of a partner’s response to a disclosure compared to the assessment
of their partner’s reaction at last disclosure (n = 69) ......................................................... 87
Abstract

Background: Genital herpes is one of the most common sexually transmitted infections in the United States. As genital herpes is incurable and contagious, individuals with genital herpes face the decision to disclose their status to potential sexual partners with each new relationship formed. Such disclosure places individuals with genital herpes in a position to face rejection, which is commonly reported as one of the most concerning aspects of having genital herpes. The present study seeks to further understand the nature of genital herpes disclosure by addressing two core aims: 1) to understand determinants of and reasons for disclosure and non-disclosure and 2) to explore the relationship between past partner reactions to a disclosure and future intentions to disclose. Methods: Data on genital herpes disclosure experiences were collected via an online questionnaire, which was distributed through a variety of online channels including social media websites and email lists. Individuals who self-identified as having genital herpes and were 18 years and older were eligible for participation. Results: In examining Aim 1, the majority of participants (80.4%) disclosed to their last sexual partner. Age, relationship length, type of relationship, and expectations of a partner’s response were significantly associated with the decision to disclose at the bivariate level. Expectations of a partner’s reaction ($AOR = .20$, 95% CI $0.074-.539$) and relationship type ($AOR = 8.31$, 95% CI 1.96-35.32) remained significant in multivariable modeling, explaining 45.2% of the variance in disclosure. Respondents who reported being in socially committed relationships and those who expected more positive partner reactions to a disclosure were more likely to disclose. Disclosure was also significantly associated with many romantic relationship building activities (e.g., establishing an
exclusive relationship) but largely not associated with the sexual progression of a relationship. The decision to disclose was commonly multi-faceted, with the majority of participants reporting more than one reason that they did or did not disclose. Primary reasons for disclosure included *I wanted to be honest*, *To protect my partner from getting herpes*, and *It’s my partner’s right to know*, while the most common reasons for non-disclosure were *I was concerned my partner would react badly*, *I was ashamed*, and *I was concerned that my partner would have rejected me*. Regarding Aim 2, participants reported low levels of negative reactions and perceived rejection in response to their last disclosure experience. Intentions to disclose in the future were high among those who anticipated future sex partners. Discussion: The decision to disclose is often multi-faceted, and relationship characteristics play a key role in the decision to disclose. Among those who did disclose in this study, the majority did not report negative repercussions, including bad partner reactions and rejection. Future studies should examine if individuals are able to accurately assess potential partner reactions in order to better understand the differences between those who choose not to disclose and those who choose to disclose but experience a negative partner reaction or rejection.
**Introduction**

**Purpose**

The purpose of this dissertation is three-fold. The first goal is to examine individual and partner level characteristics associated with genital herpes disclosure and non-disclosure. The second goal is to build on existing qualitative studies to understand partner reactions to a genital herpes disclosure using quantitative methodology, specifically highlighting associations with perceptions of rejection. Finally, this study seeks to understand how partner reactions to disclosure, including rejection, are associated with future intentions to disclose. Together, a more comprehensive picture of the role of rejection in the disclosure process is formed.

**Dissertation Format**

A manuscript-style format is used for this dissertation. This section introduces the purpose of the study and contains a comprehensive review of the literature. Section 2 contains the first manuscript, which explores individual and relationship characteristics that are associated with genital herpes disclosure. This manuscript will be submitted to the *Journal of Health Psychology*. Section 3 contains the second manuscript, which addresses how past partner reactions to a genital herpes self-disclosure are related to future intentions to disclose. The second manuscript will be submitted to the *American Journal of Health Behavior* after additional research is conducted to expand on existing dissertation findings.
Comprehensive Literature Review

Sexually Transmitted Infections

Some of the most prevalent communicable diseases in the U.S. are sexually transmitted (Centers for Disease Control and Prevention, 2011). Discussed as either sexually transmitted disease (STDs) or sexually transmitted infections (STIs), infections that are sexually transmitted are a considerable public health problem. In 1997, the Institute of Medicine identified sexually transmitted infections as the “the hidden epidemic” and called for a coordinated national approach to reducing the burden of STIs in the U.S. (Eng & Butler, 1997). More than a decade later, STIs persist as a public health priority.

The total public health burden of STIs is difficult to capture. The Centers for Disease Control and Prevention (CDC) (2010b) estimates that approximately 19 million new cases of chlamydia, gonorrhea, and syphilis occurred in 2009 accruing over $16.4 billion dollars in direct medical costs. However, chlamydia, gonorrhea, and syphilis are just some of the many infections and diseases that fall under the larger umbrella of sexually transmitted infections. These numbers fail to capture other prominent STIs including viral STIs such as human papillomavirus (HPV) and genital herpes, which are not curable (Centers for Disease Control and Prevention, 2010a).

Genital Herpes

Herpes simplex virus (HSV) is a common, incurable skin infection (Centers for Disease Control and Prevention, 2012a). Usually referred to as herpes, HSV can

---

1 For the purposes of this dissertation, the term sexually transmitted infection (STI) will be used.
manifest on many areas of the body but is most commonly found around the mouth and the genital region (Centers for Disease Control and Prevention, 2010a). Herpes is caused by two types of the herpes simplex virus: HSV-1 and HSV-2. Despite few differences between HSV types, outbreak location on the body can result in serious social repercussions. HSV on the mouth, generally attributed to HSV-1, is considered commonplace. Referred to as “cold sores” or “fever blisters,” outbreaks are considered annoying and unattractive but do not carry an overly negative connotation (Posner, 2000). On the other hand, genital herpes is one of the most stigmatized diseases in the U.S. (Posner, 2000).

National statistics examine HSV-2 seroprevalence to estimate the prevalence of genital herpes in the U.S. Data from the National Health and Nutrition Examination Survey (NHANES) suggest that the prevalence of genital herpes declined from 21% in the 1988-1994 cycle to 17% in the 1999-2004 cycle (Xu et al., 2006) and leveled off to 16.2% in the 2005-2008 cycle (Xu, Sternberg, Gottlieb, Berman, & Markowitz, 2010). However, HSV-2 seroprevalence as the indicator of population genital herpes underestimates the actual prevalence of genital HSV (Centers for Disease Control and Prevention, 2012b). Though presence of HSV-2 antibodies almost always indicate genital infection (Centers for Disease Control and Prevention, 2010a), HSV-1, historically associated with oral herpes, is a growing contributor to genital herpes cases (Lafferty, Downey, Celum, & Wald, 2000; C. M. Roberts, Pfister, & Spear, 2003; Wald, 2006). The CDC (2006) suggests that up to 50% of genital herpes cases could be due to HSV-1. Conservative estimates report that one in five Americans have genital herpes
based on HSV-2 seroprevalence (Centers for Disease Control and Prevention, 2006), which makes HSV one of the most prevalent STIs in the U.S.

According to the CDC, individuals with genital herpes experience the virus in different ways (Centers for Disease Control and Prevention, 2010a). Most individuals with genital herpes do not experience symptomatic outbreaks, typically characterized by painful sores in the genital region. Some individuals may not recognize the symptoms expressed as genital herpes because they are mild, including genital itching, redness, or flu-like symptoms rather than sores. Other individuals may have an initial symptomatic first episode of genital herpes and not present with symptoms again. The first episode of genital herpes tends to be the worst. Over time, outbreaks often become less frequent. For most, genital herpes is more of an annoyance from a physical standpoint (Green, 2004).

However, genital herpes can have more serious consequences regarding physical health, including increased risk for HIV acquisition, transmission to the eyes, and neonatal transmission. HSV-2 increases the risk for HIV acquisition (Holmberg et al., 1988). According to a meta-analysis of longitudinal HIV studies, HSV-2 increased the relative risk of HIV infection by three fold in both men and women in the general population (Freeman et al., 2006). HSV can also be spread to the eyes, known as herpes simplex keratitis or eye herpes, and potentially cause blindness (Farooq & Shukla, 2012). Transmission of HSV from mother to child during pregnancy or delivery can cause serious health effects. Neonatal herpes can result in infant mortality (Brown et al., 1997; Handel, Klingler, Washburn, Blank, & Schillinger, 2011). However, neonatal herpes is rare. Studies suggest the prevalence of neonatal herpes ranges depending on region of
the US and study methodology (Brown et al., 2003; Mahnert, Roberts, Laibl, Sheffield, & Wendel, 2007; Whitley, Davis, & Suppapanya, 2007). According to a 2006 population based study, the rate of neonatal herpes was 9.6 per 100,000 live births (Flagg & Weinstock, 2011). The risk of serious complications as a result of maternal HSV is highest for women who newly acquire HSV during the third trimester of pregnancy (Brown et al., 1997; Brown et al., 2003; Centers for Disease Control and Prevention, 2010a). For those with recurrent genital herpes, a cesarean section is advised only if visual symptoms of genital herpes are present at the time of delivery (Centers for Disease Control and Prevention, 2010a).

Studies have consistently shown that the social aspects of having HSV are considerably more burdensome than the physical manifestations of the virus (Green et al., 2003; Melville et al., 2003). Negative psychosocial consequences, including depression (Beauman, 2005), anxiety (Beauman, 2005; Oster & Cheek, 2008), feelings of unworthiness (Newton & McCabe, 2008b), decreased feelings of sexual attractiveness (Mindel, 1993; Newton & McCabe, 2008b), and fear (Lee & Craft, 2002; Mindel, 1993) have been associated with a genital herpes diagnosis. The most frequent consequence of a herpes diagnosis is a reduction or complete withdrawal from sexual activity (American Social Health Association, 2000). In general, a negative stigma is attached to having an STI. Dr. Anna Wald, one of the leading experts in genital herpes research, told The New York Times that “Herpes has a stigma attached to it that even H.I.V. doesn’t have anymore.” (Sabo, 2010). Individuals indicate that living with the stigma associated with herpes is hardest part of having the disease (Lee & Craft, 2002; Melville et al., 2003; Mindel, 1993; Richards, Krantz, Selke, & Wald, 2008). Herpes symptoms can be treated,
but herpes cannot be cured (Richards et al., 2008). As a result, herpes stigma remains with someone for life.

Transmission of genital herpes is complex. Genital herpes transmission is commonly described as skin-to-skin transmission, though HSV can be spread through lesions, mucosal surfaces, genital secretions, or oral secretions (Centers for Disease Control and Prevention, 2012b). Iconic symptoms of genital herpes such as sores or lesions do not need to be present to spread the virus. Many individuals with HSV do not exhibit symptoms of the virus, yet they can still transmit HSV to a partner (Centers for Disease Control and Prevention, 2012b). Asymptomatic shedding is believed to occur up to 20% of days (Centers for Disease Control and Prevention, 2012a; Tronstein et al., 2011). Individuals without classic symptoms of HSV are reportedly responsible for the majority of new genital HSV cases (Centers for Disease Control and Prevention, 2012b). Typically these individuals are not aware they have the virus.

**Public Health Strategies**

A combination of strategies is endorsed by the public health community to reduce the burden of genital HSV in the U.S. As with other STIs, limiting the number of sexual partners is one safer sex strategy recommended (Centers for Disease Control and Prevention, 2010a). Some experts have suggested that this strategy is less likely to be effective in HSV acquisition as opposed to other STI transmission because herpes transmission occurs more often in relationships regarded as monogamous and serious (Wald et al., 2006). Unlike infections such as gonorrhea and chlamydia, genital herpes is not reflective of high partner change necessarily (Corey & Handsfield, 2000). Additionally, reduction in sexual activity was low even among individuals who suspected
they had genital herpes (Crosby, Head, Moore, & Troutman, 2008). Though remaining in a monogamous relationship with someone who is uninfected remains a positive strategy for HSV transmission (Centers for Disease Control and Prevention, 2010a), efforts at reducing partners may not prove effective at reducing HSV burden.

The CDC reported that male condoms could provide some protection against HSV transmission (Centers for Disease Control and Prevention, 2010). Studies have not been able to determine the exact role of condoms in HSV transmission. This is due to a number of factors including correct and consistent condom use, the transitory nature of HSV, and the inability for male condoms to cover all areas that might be able to transmit the herpes virus. A pooled analysis of six prospective studies examining HSV-2 transmission found that individuals using male condoms 100% of the time had a 30% lower risk of acquiring HSV-2 (Martin, Krantz, Gottlieb, & et al., 2009). Though providing some protection, the study concluded that the protection from HSV-2 was much lower than protection from other STIs (Martin et al., 2009). As such, male condoms are just one of the many tools recommended to reduce HSV transmission.

In addition to behavioral strategies, pharmaceutical strategies are also recommended to reduce HSV transmission. Three medications have been approved to reduce the activation of HSV when used as suppressive therapy (Centers for Disease Control and Prevention, 2010). Suppressive therapy has been found to reduce the number of outbreaks by 70-80% among individuals with frequent outbreaks (Centers for Disease Control and Prevention, 2010a). Once-daily valacyclovir reduced the likelihood of HSV-2 transmission among heterosexual, monogamous couples (Corey et al., 2004). Approved medicines for suppressive treatment also reduced the number of days an
individual with HSV sheds virally without an outbreak, reducing the number of days a partner is at risk for transmission (Leone, Warren, Hamed, Fife, & Wald, 2007; Mertz, 2008). However, this strategy can be costly due to the need to buy medication for daily use. It also works best for individuals with recurrent genital herpes outbreaks and less so for individuals with infrequent symptoms (Centers for Disease Control and Prevention, 2010a).

A fourth strategy includes the role of asymptomatic HSV screening. This is perhaps the most controversial strategy suggested in the fight against HSV proliferation; experts in the field of genital herpes research are divided as to the role asymptomatic testing should play in the fight against genital herpes (The New York Times, 2010). Those in favor of asymptomatic HSV testing highlight that HSV is most commonly transmitted by someone who is unaware that they have genital HSV (Wald et al., 2006). Therefore, identification of asymptomatic individuals is an important component of reducing genital herpes spread. Additionally, recent advancements in type specific IgG HSV anti-body tests have increased accuracy of asymptomatic HSV testing diagnoses (Ashley, 2002). Proponents have highlighted that trauma associated with symptomatic positive tests results are often acute with very little impact on long term mental health outcomes (Miyai, Turner, Kent, & Klausner, 2004; Richards et al., 2007; Rosenthal et al., 2006; Smith et al., 2000). Those who oppose HSV serologic testing have argued that although global measures of mental health status often do not indicate clinical levels of anxiety or depression after a positive serological test, there are numerous negative psychosocial impacts to a positive genital herpes test result (Mark et al., 2008; Swanson, Dibble, & Chenitz, 1995). Additionally, a positive test result cannot determine where on
the body the HSV infection exists, so it provides an unclear plan for risk reduction without identifiable symptoms (Nahmias, 2002). Despite increased testing accuracy using IgG antibody testing, IgG antibodies take time to develop and test results have a high chance of a false negative in the first few weeks of infection (Wald & Ashley-Morrow, 2002). Behavioral studies have indicated that individuals who are asymptomatic with a positive HSV test result are unlikely to engage in risk reduction measures after a diagnosis, such as condom use and limiting partners (Crosby, Head, DiClemente, Meyerson, & Troutman, 2008). As a result of these factors, current CDC recommendations do not call for routine antibody testing for HSV in the general population (Centers for Disease Control and Prevention, 2010). Instead, CDC recommendations for HSV testing are nuanced. According to the 2010 Sexually Transmitted Disease Treatment Guidelines, “Type-specific HSV serological assays might be useful in the following scenarios: 1) recurrent genital symptoms or atypical symptoms with negative HSV cultures; 2) a clinical diagnosis of genital herpes without laboratory confirmation; or 3) a partner with genital herpes. HSV serologic testing should be considered for persons presenting for an STI evaluation (especially for those persons with multiple sex partners), persons with HIV infection, and MSM at increased risk for HIV acquisition” (p. 21).

Unlike testing, disclosure of one’s genital herpes status to a partner has been largely embraced by the public health professionals as a strategy to reduce transmission. Current STD treatment guidelines recommend that “All persons with genital HSV infection should be encouraged to inform their current sex partners that they have genital herpes and to inform future partners before initiating a sexual relationship” (Centers for
Disease Control and Prevention, 2010, p. 23). For advice on how to cope with a herpes diagnosis and how to navigate romantic relationships in the future, the CDC directs individuals to the American Social Health Association (ASHA) (Hook & Leone, 2006). On the ASHA website in a section dedicated to relationships, ASHA has a segment titled “How will a partner react?” This segment of the ASHA website states,

“Some may overreact. Some won't bat an eye. Since many people have genital herpes or have heard about it, many people won't be shocked or surprised. From the stories that we've heard at the Herpes Resource Center, most people will react well, and will appreciate your honesty and respect for the relationship and their wellbeing. While a negative reaction is possible, this doesn’t necessarily mean a bad ending. If that person values you as an individual and is interested in a relationship, something as minor as herpes shouldn’t stand in the way. If it does, then that person obviously wasn’t a good fit in the first place.

Whatever happens, try to be flexible. Give your partner time to respond, think about what you've said and absorb the information. Remember when you first found out? It took you time to adjust, too.

You don't have to be overly concerned about protecting a partner's feelings. And, you may want to reconsider a relationship where you have to do all the emotional work. A safer sex discussion might help you find out if this partner is a good candidate for your love and attention.

A few people are going to react negatively. It won't matter what you say or how you say it. Remember, these people are the exception not the rule. If a partner decides not to pursue a relationship with you because you have herpes, it is best to know this now. There are many people who will be attracted to you for who you are--with or without herpes.

Most people react well. They appreciate your approach, honesty and maturity in addressing an important health issue. Remember to put herpes into perspective: it is an annoying, recurrent skin condition that is treatable and manageable--no more, no less.” (Lo, 2006)

However, this information is unsubstantiated by research and directly contradicts fears of individuals with genital herpes illuminated by the literature.
Disclosure in the Broader STI Literature

Disclosure is a subset of the broader partner notification literature. Partner notification has two primary operational practices. The first use for “partner notification” is the act of telling potential sexual partners of infection status prior to engaging in intimate acts, also commonly referred to as disclosure (Centers for Disease Control and Prevention, 2006). This type of partner notification is primarily associated with incurable STIs. This prospective form of partner notification allows the potential sexual partner to make an informed decision about engaging in sexual contact. The second use of partner notification is “contact tracing” (Centers for Disease Control and Prevention, 2006). Contact tracing is the notification of previous sexual partners about an STI diagnosis either by the patient or the provider (Boskey, 2008). Often, public health agencies will assist in this process for more severe reportable diseases, such as syphilis. Contact tracing attempts to contact and treat retrospectively the sexual partners named by the index patient, the patient who initially presents for treatment.

Despite the varying definitions of partner notification, it is clear that it has two goals; 1) to inform individuals that they have been or could be potentially infected; and 2) to stop the chain of transmission. Whereas the first goal can be completed successfully regardless of the type of STI, achieving the second goal follows a more ambiguous path. The Centers for Disease Control and Prevention (2006) concluded that there was a “paucity” of research to indicate that partner notification reduces risk taking behaviors or disease incidence, concluding that partner notification may not reduce prevalence at a population level. Additionally, studies that examine partner notification often did not measure behavioral and disease prevention outcomes (Green, 2004; Melville et al., 2003;
Newton & McCabe, 2008a). Programmatic successes were measured on the basis of successful notification. However, notification does not necessarily translate into testing or treatment.

Cited benefits of partner notification with respect to disclosure range from fulfilling perceived moral obligations to preventing disease. Most benefits do not have a firm grounding in research, but rather in public opinion and support. A commonly cited benefit of partner notification is honesty (American Social Health Association, 2009; Green et al., 2003; Rhode Island Department of Health, 2009). The position that it is important to be an honest and forthright person when engaging in sexual activity, because it is the responsible thing to do, is embraced as a part of responsible sexuality. Another cited benefit is respect for others’ health. Notifying potential partners demonstrates a level of respect for their health and a desire to allow individuals to make a decision regarding sexual activity based on potential risks (American Social Health Association, 2009). Partner notification has the potential to reduce disease incidence by breaking the chain of transmission (Rhode Island Department of Health, 2009). Identifying and treating individuals reduces chances of unknowingly continuing to spread the infection. Notifying a partner could reduce negative consequences of contracting an infection if promptly managed. For instance, knowledge of chlamydial infection and subsequent treatment reduces risk of pelvic inflammatory disease (Centers for Disease Control and Prevention, 2007). Only the last benefit of disclosure addresses disease burden with little evidence of its efficacy in doing so (Centers for Disease Control and Prevention, 2010a).
Many aspects of the broader public health strategies and implications regarding partner notification do not readily apply to the genital herpes paradigm. Unlike curable STIs, partner tracing is not an effective strategy at reducing HSV burden because herpes cannot be cured. Therefore, disclosure comparisons are not parallel with common infections such as gonorrhea, chlamydia, or the less common syphilis. Unlike HIV, which can affect any aspects of one’s life and health, disclosure to individuals outside of a sexual relationship context is often unnecessary and uncommon unless seeking emotional support or identity confirmation among individuals with genital herpes (Lee & Craft, 2002). Genital herpes disclosure occurs most frequently within sexual relationships (Patrick, Rosenthal, Stanberry, Hurst, & Ebel, 2004). HIV does not provide an appropriate parallel because knowledge of one’s HIV status also provides a clear prevention strategy when disclosing through the correct and consistent use of condoms; the benefits of condom use are less pronounced among individuals with genital herpes (Centers for Disease Control and Prevention, 2010a). Disease severity also eliminates comparisons in the broader STI literature. The potential severity of HIV and cancerous types of HPV do not align with the generally mild and transitory nature of genital herpes. Genital herpes typically has little to no effect on an individual’s overall physical health and rarely evolves into serious disease in immunocompetent individuals (Centers for Disease Control and Prevention, 2010a). Rather it is the social and emotional aspects of the infection that are most troubling (Green, 2004). Therefore, the closest parallel to genital herpes in the broader literature is experiences with genital warts. Genital herpes and genital warts are both fairly low risk, incurable skin infections (Centers for Disease Control and Prevention, 2010a). Additionally both can be visible and share a mode of
transmission through skin-to-skin contact. Most importantly, the nature of disclosure is similar between these two STIs. Therefore, I will explore the genital herpes and genital wart literature simultaneously to better understand the role of disclosure.

**Genital Warts and Genital Herpes Disclosure**

*Psychosocial Impact*

The psychosocial impact of these STIs has been hotly contested. Qualitative studies have suggested that acquiring genital herpes or genital warts has a profound impact on self-conceptualization (Hammarlund, Lundgren, & Nyström, 2007; Melville et al., 2003; Newton & McCabe, 2003; Perrin et al., 2006; Taylor, Keller, & Egan, 1997), which requires the individual to come to terms with their diagnosis and preexisting prejudices concerning the types of individuals who obtain STIs. One gentleman remarked, "Now they stigmatize me as I once stigmatized them" (Hammarlund et al., 2007). The process of placing oneself in the category of “individuals with a sexually transmitted infection” and melding that stereotype with existing thoughts about oneself is challenging (Perrin et al., 2006). Many have adopted views that they were now dirty, undesirable, stigmatized, and less attractive (Melville et al., 2003). The process of blending this new information was easier for individuals who did not hold strong prejudices or stereotypes regarding individuals who acquire STIs prior to their diagnosis (Hammarlund et al., 2007). However, among individuals who held strong preconceptions this process took longer and the psychosocial impact of the diagnosis was stronger (Mark, Gilbert, & Nanda, 2009). Advice from individuals who have genital warts for a year to those newly diagnosed included both the message to maintain a balanced view of genital
warts. As part of the balanced view, individuals’ advice specifically mentioned that adjustment gets better over time (Taylor et al., 1997).

Results from quantitative studies also support the theory that adjustment to a genital herpes diagnosis improves over time. Individuals report the highest levels of psychosocial distress immediately following a diagnosis (Handsfield, Warren, Werner, & Phillips, 2007; Mark et al., 2009; Richards et al., 2007). The psychosocial trauma occurred for most individuals even if they did not have any physical symptoms of the STI (Richards et al., 2007; Rosenthal et al., 2006). However, cohort studies have suggested that psychosocial disruptions were not long lasting, especially if participants were diagnosed through serologic testing for HSV2 (Richards et al., 2007; Rosenthal et al., 2006). The majority of studies tracking individuals with genital herpes found little overall increased psychosocial morbidity at three- and six-month follow ups, despite a peak at two-week and one-month measurements (Miyai et al., 2004). The initial spike in psychosocial distress after a diagnosis was similar among those who have experienced genital warts for a longer period of time as well (Scrivener, Green, Hetherton, & Brook, 2008).

Although improvement in psychosocial well-being is demonstrated across time consistently for the majority of individuals, individuals who experience external physical symptoms of the disease experience lower levels of quality of life. Individuals with external genital warts reported lower levels of quality of life than those who experience normal Pap smears or abnormal Pap smears that have not been confirmed with biopsy (Pirotta et al., 2009). However, individuals with genital warts reported lower levels of quality of life than those with a biopsy confirmation on more global measures of well-
being, despite having a medically less serious condition. Similarly, individuals who were
diagnosed for HSV2 serologically without previous experience with symptoms displayed
lower levels of prolonged distress than individuals with a history of herpes symptoms
(Mark et al., 2009; Miyai et al., 2004; Rosenthal et al., 2006; Smith et al., 2000).
Suppressive medication used with symptomatic herpes patients had a treatment/time
interaction however, suggesting that suppressive treatment by reducing recurrences aided
in increasing quality of life over time (Handsfield et al., 2007).

Though global measures of psychosocial well-being tend to suggest gradual
coping with a genital herpes or genital warts diagnosis, disease-specific measures tend to
suggest a prolonged period of increased psychosocial distress. Measures of general
anxiety, depression, isolation, fear, and sadness have tended to show little to no
difference from baseline among those newly diagnosed at three-month follow up (Miyai
et al., 2004; Richards et al., 2007; Rosenthal et al., 2006). However, measures specific to
herpes-related quality of life indicate a different pattern. Herpes-related quality of life
measures show elevated distress that is disease specific regarding transmission,
disclosure, and relationships (Mark et al., 2009; Newton & McCabe, 2008a; Richards et
al., 2007; Rosenthal et al., 2006). The Herpes Related Quality of Life scale (Doward et
al., 1998) has elicited frequent endorsements of statements regarding the negative impact
herpes plays in quality of life. Disease-specific anxiety, depression, and quality of life
have also been substantiated in the qualitative literature. When asked about how the STI
has impacted life, the majority of participants have reported ways that herpes or genital
warts have negatively impacted their life or relationships (Melville et al., 2003; Newton
& McCabe, 2008a). However, many of these individuals also suggested that their overall
health was good and would not be categorized as clinically depressed or anxious. The distinction between overall health and sexual health indicates that low risk STIs impact psychosocial well-being but not overall mental health or sociability.

However, age may play a role in adjustment. Studies that examine younger populations tend to report higher levels of distress than older populations. Mark et al. (2008) found increased levels of psychosocial distress among individuals aged 18-39 years who tested positive for HSV2 without herpes symptoms even at the three-month follow-up. The individuals who tested positive reported lower levels of well-being on the General Health Questionnaire from baseline despite having no history of symptoms associated with genital herpes. Conversely, Richards and colleagues (2007) found that older populations reported lower levels of psychosocial distress. The median age of asymptomatic HSV2 diagnosis was 46 years old, and this population demonstrated lower levels of herpes related stress. The psychosocial distress disparity is unlikely due to age alone, but rather how established one’s romantic relationship is. Among younger populations, romantic relationships tend to be less stable and starting new relationships could be the source of the additional distress, whereas Richards et al. (2007) reported 63% of the individuals were either married or living with a long term partner in their sample.

Disclosure

Disclosure sometimes occurs with non-romantic or non-sexual partners. Disclosure outside of romantic relationships is often encouraged in order to obtain social support, but is not given as much emphasis as disclosure within a relationship. Women tend to disclose to friends and family more in order to seek social support (Barnack-
Coping through seeking social support from family and friends is not utilized among men as much as it is among women. Additionally, younger women who rely on parents for treatment and those with more serious complications might have been more likely to tell family members (Gilbert & Omisore, 2009; Pirotta et al., 2009). Unlike individuals who disclose their HIV status to non-romantic others, this disclosure does not tend to affect the relationship between the parties as the nature of genital herpes or warts does not typically come into play in the relationship dynamics.

Initiating new relationships can be anxiety-inducing for individuals with genital herpes (Mindel, 1993). Patrick et al. (2004) reported the most frequently selected concern from a list of questions about a recent herpes diagnosis was: “Is this the end of my love/sex life?”. Fifty-three percent of participants checked this option as one of their top three concerns. Telling one’s partner about having herpes was most frequently the source of distress experienced after a herpes diagnosis (Lee & Craft, 2002; Mindel, 1993; Newton & McCabe, 2008b). Zacharioudakis (1993, p. 115) claimed that disclosure is “the single most stressful and anxiety/depression inducing issue confronting patients.” VanderPlate and Aral (1997) indicated the source of this stress is because disclosure is the time when one must face the social realities of the disease and confront their own fears concerning it. Ethical and legal morays require one to tell a potential partner they could be at risk of acquiring the infection, however that puts the individual with herpes in a position to be rejected. The fear of rejection is one of the most frequently cited negatives associated with having genital herpes (Lee & Craft, 2002; Melville et al., 2003; Mindel, 1993). Despite this overwhelming and fairly universal fear, no study has
systematically explored whether or not disclosure results in rejection in a U.S. population.

Disclosure to a romantic partner or potential sexual partner has been the primary focus in the disclosure literature. In general, relationship characteristics tend to play a large role in the decision to disclose having genital herpes or genital warts. Disclosure is more likely to occur in long term, close romantic relationships and least likely to occur with casual partners (Green et al., 2003; Newton & McCabe, 2008a; Scrivener et al., 2008). Additionally, individuals identified with symptomatic infection were more likely to tell an existing partner if the diagnosis occurred within the time of the relationship (Patrick et al., 2004). The transition to a more serious relationship, such as moving in together or an engagement, can also prompt disclosure (Green et al., 2003).

Fear of rejection plays a large role in the decision to disclose (Gilbert & Omisore, 2009; Green et al., 2003; Melville et al., 2003). In counseling sessions, Shepherd (2010) found that disclosure was associated with thoughts of rejection. In an analysis of herpes support chat room conversations, the majority of questions were about how to tell a partner and which partners were most important to disclose to (Gilbert & Omisore, 2009). Many individuals report not disclosing because they do not believe that their partner would take the news well or would end the relationship as a result. Green and colleagues (2003) reported 32% of individuals did not disclose to their partner because of the potential for a negative reaction and 22% of the sample indicated non-disclosure was due to the inability to predict partner reaction and therefore disclosure was too risky. Disclosure is more likely to occur if the individual expects a more positive reaction from their partner (Green et al., 2003; Keller, von Sadovszky, Pankratz, & Hermsen, 2000).
Those who cannot ascertain a partner’s likely reaction are less willing to disclose (Green et al., 2003), and those who expect rejection and lack of support avoid disclosure (Newton & McCabe, 2008b; Scrivener et al., 2008).

In assessing emotional responses to asymptomatic HSV-2 positive test results, Melville and colleagues (2003) found fear of disclosure was a large source of psychosocial morbidity. Of their sample 45.8% reported a fear of telling a current partner, 16.7% reported a fear of telling past partners, and 50% reported a fear of telling future partners as a source of distress as a result of their diagnosis. These numbers may have underrepresented the fear of disclosure, as individuals with asymptomatic genital herpes diagnoses typically report less disclosure. Several theories as to why this occurs have been posited. Evidence suggests that experiencing symptoms of a genital herpes outbreak can prompt disclosure (Green et al., 2003).

The timing of disclosure to romantic partners has also been examined. Recommendations are to disclose prior to sexual intimacy in order to reduce the risk of transmission. For infections like genital herpes and genital warts that are spread through skin-to-skin contact, this would ideally occur before any intimate touching in the genital region (American Social Health Association, 2012). However, several studies have indicated that the onset of sexual intercourse is more poignant for disclosure. Additionally, many individuals report disclosing after engaging in sexual intercourse with a partner. Scrivener et al. (2008) found that 69% of individuals who disclosed having genital warts did so after having engaged in sexual intercourse. Additionally, Keller and colleagues (2000) found that 31% of individuals disclosed having genital warts after engaging in sexual intercourse. Among women who acquired genital herpes from a
partner, 46% reported that disclosure occurred after sexual initiation (Wald et al., 2006). Green and colleagues (2003) found that the pattern of sexual intercourse prior to disclosure could last for a significant period of time. Even in times when disclosure does occur, it does not occur in a way most beneficial for behavior change.

Low levels of disclosure despite recommendations have led researchers to explore reasons for disclosure and non-disclosure. Among those who disclose, the themes of honesty and partner’s right to know were most common (Keller et al., 2000; Newton & McCabe, 2008b; Scrivener et al., 2008). Feeling that a partner had the right to know encompassed one’s moral and legal obligation, including the notion of informed consent to sex. Desire to protect one’s partner was expressed as a reason for disclosure, but Hammarlund, Lungren, and Nystrom (2007) suggested that fear of transmission is less strong than the fear to avoid rejection. Some of the most common reasons for non-disclosure include lack of initiation of sexual intercourse (Keller et al., 2000), fear of rejection (Green et al., 2003; Hammarlund et al., 2007; Mark et al., 2009; Melville et al., 2003; Newton & McCabe, 2008b; Scrivener et al., 2008; Shepherd, 2010), embarrassment (Keller et al., 2000; Scrivener et al., 2008), casual partner (Green et al., 2003; Scrivener et al., 2008), and using condoms (Green et al., 2003; Scrivener et al., 2008) among other less prominent reasons. Interestingly, regardless of the decision to disclose or not disclose, the majority of individuals reported feeling “fine” or “good” about their decision (Keller et al., 2000).

Several studies have implicated that there are benefits to disclosure. Those who disclose have reported lower levels of anxiety than those who do not (Newton & McCabe, 2008a; Scrivener et al., 2008). It is not clear if lower levels of anxiety lead to
non-disclosure or whether non-disclosure leads to higher levels of anxiety. However, it is likely that withholding the information from someone can add to any preexisting anxiety, as the fear that they could find out is present. Disclosure was associated with low levels of regret (Keller et al., 2000). Regret was higher among non-disclosers (Scrivener et al., 2008) and individuals who delayed disclosure until after initiation of sexual intercourse (Keller et al., 2000). This low level of negative reactions from partners could be due to the relationship between expectations and disclosure, whereas those who expect less negative responses disclose at higher rates. Scrivener et al. (2008) found that support from one’s partner actually increased over time for the majority of individuals who disclosed, though they do mention some negative effects to the relationship.

**Weaknesses of Disclosure in Herpes Prevention**

Only one study conducted has suggested an association between disclosure and transmission delay. Wald and colleagues (2006) found relationships in which disclosure was associated with a longer time (270 vs. 60 days) until HSV-2 acquisition. However, this relationship did not exist for individuals with genital HSV-1 diagnosis. Several limitations exist with these findings. First, this retrospective study only examined disclosure among symptomatic individuals who sought STI services. Additionally, the sample of individuals who experienced a disclosure was very small \( n = 22 \) and were overwhelmingly female. Finally, disclosure of genital herpes status could have occurred prior to or after sex. Because disclosure could occur either before or after sex, one must question exactly by what mechanism this was protective. Merely knowing that you could have been exposed after the fact does not provide any additional protection during the sex act. Further research is necessary to understand the association between disclosure and
genital herpes acquisition. As of now, the recommendation exists more due to moral and ethical mores rather than scientific evidence as an effective risk reduction strategy.

**Methodological Considerations**

To address the specific aims of 1) identifying individual and relationship characteristics that are associated with genital herpes disclosure in a sample of individuals with genital herpes and 2) understanding how past partner reactions to a genital herpes self-disclosure are related to future intentions to disclose, several methodological considerations are discussed.

**Sample**

The primary challenge when conducting genital herpes research is identifying and obtaining the population of interest. Individuals with genital herpes are a highly stigmatized, hard to reach population (Breitkopf, 2004). A comprehensive sampling frame for individuals with genital herpes does not exist, therefore non-random sampling methods are appropriate (Neuman, 2006). Due to the concealability of genital herpes and the stigma associated with the disease, it is hard to identify individuals with genital herpes (Breitkopf, 2004). Despite the prevalence of genital herpes in the U.S., few individuals who have HSV are aware of it. According to the most recent NHANES data, approximately 80% of individuals who tested positive for HSV-2 did not report having genital herpes (Xu et al., 2010). This considerably reduced the target sample size, because individuals must be aware they have genital herpes and had to have an experience in which they needed to disclose having HSV.
Design

Past studies examining disclosure of genital herpes status to a potential or past romantic partner primarily used qualitative methods to collect information (Green et al., 2003; Melville et al., 2003; Newton & McCabe, 2008b). This study builds on previous qualitative findings to understand associations between concepts of disclosure, partner’s reactions, rejection, and future intentions to disclosure. To my knowledge a quantitative approach has yet to be used to explore genital herpes disclosure with specific regard to perceptions of partners’ reactions and rejection. Therefore, this study will be the first to apply inferential statistics to associations noted in the qualitative literature to understand the statistical relationships between factors identified in the qualitative literature as being important to the disclosure experience.

Beyond the ability to estimate prevalence and associations, there are several other benefits to utilizing a quantitative approach. A quantitative approach, and more specifically a survey method, allows researchers to collect a large amount of data from a variety of participants in a smaller time frame (Neuman, 2006). A greater level of anonymity also is established through surveys over face-to-face interviewing (Neuman, 2006). Rather than having to identify as someone who has genital herpes to a researcher in person, an individual can fill out the survey privately without additional people knowing about their condition. Anonymity may also increase the reliability and validity of findings, as individuals may be more inclined to answer truthfully to sensitive material and less inclined to provide a socially acceptable answer (Neuman, 2006).

The quantitative approach also has its drawbacks. One of the primary drawbacks discussed above is the need for a sufficiently large sample to adequately perform
inferential statistics. A sample must be sufficiently large to provide enough power to correctly reject the null hypothesis (Stevens, 2007). With a sample that is hard to obtain, this reduces the feasibility of the study. Without a sufficiently large sample, this approach loses many of its benefits, such as the ability to conduct inferential statistics (Pedhazur, 1997).

This study is largely descriptive in nature. The majority of the analyses are basic associations using chi-square statistics. The statistical procedure requiring the largest sample size for adequate power included in this proposal is logistic regression. Power analyses for logistic regression suggest that required sample size is dependent on both the number of predictors in the regression equation and the expected effect size of the predictor of interest (Pampel, 2000). Factors significant in bivariate analyses were included in the regression model. The general rule of thumb for sample size calculation suggests 10 cases for each variable in the logistic regression model (Peduzzi, Concato, Kemper, Holford, & Feinstein, 1996), however more recent simulation studies suggest that this rule can be relaxed (Vittinghoff & McCulloch, 2007). As four variables were significant at the bivariate level, a minimum sample size of 40 was necessary to conduct a logistic regression. This expectation was met.

Data Collection

Previous genital herpes studies have predominantly recruited participants through three venues: STI clinics, HSV testing trials, and herpes support groups. Individuals recruited through clinics generally are seeking a diagnosis or treatment for genital herpes symptoms. Individuals with symptomatic genital herpes have reported lower quality of life and worse psychosocial adjustment to having genital herpes as compared to
individuals with asymptomatic HSV (Keller, Jadack, & Mims, 1991; Rosenthal et al., 2006; Smith et al., 2000). Individuals recruited through this venue typically receive an initial diagnosis of genital herpes. This sampling strategy has dominated literature that looks prospectively at psychosocial implications of a genital herpes diagnosis. However, this recruitment strategy is limiting in several ways. Individuals with genital herpes generally experience the highest amounts of anxiety and stress right after their initial diagnosis (Mark et al., 2009). Studies have suggested the acute, negative psychosocial distress tends to decrease over time (Wald & Ashley-Morrow, 2002). Also, these individuals have not had experience with forming new relationships with knowledge about having genital herpes. Therefore, their disclosure experiences with a sexual partner are predominantly limited to the existing relationship they are currently in upon diagnosis. Findings suggest that disclosure is highest in this context, as genital herpes has a very short incubation window (2-20 days) and the infection most likely came from their current partner prompting disclosure (Patrick et al., 2004).

Though HSV testing trials typically operate through clinics (ClinicalTrials.gov, 2012), these individuals are characteristically different than individuals who are diagnosed after seeking treatment for symptoms of genital discomfort. To be included in these studies, inclusion criteria require that the individual does not have a previous diagnosis of genital herpes or previous genital herpes symptoms. During the study, these individuals are primarily diagnosed through HSV anti-body test. It is only after test results that the majority of individuals are aware of their herpes status. As mentioned above, symptomatic individuals tend to display the highest levels of distress. Additionally, enrollment in these trials is accompanied by higher levels of counseling
post diagnosis than is traditionally experienced in other medical settings (Wald & Ashley-Morrow, 2002).

Though support groups offer a venue for gathering a number of individuals with genital herpes at one time, evidence suggests that individuals attending these support groups cope differently than other individuals with genital herpes. These individuals tend to report more psychosocial consequences of having genital herpes. Therefore, in understanding stigma and disclosure, these individuals might not be indicative of the larger population with genital herpes (Breitkopf, 2004).

One study of genital herpes disclosure employed an online convenience sample of individuals with genital herpes and human papillomavirus. Newton and McCabe (2008a) hosted a link to their online questionnaire on sexual health websites, support groups, online communities specializing in herpes and HPV, and general health websites. One of the limitations highlighted was that individuals recruited through these sites specifically may have a more negative experience with having an STI than other individuals with these STIs (Newton & McCabe, 2008a). To address and build upon this limitation, this study recruited participants from a variety of online venues. In addition to herpes-specific and STI-specific online venues, broader online communities were utilized for recruitment. This includes social networking sites (SNS) like Facebook and Twitter, which may cull a different segment of the population of interest.

The initial sites that served as recruitment venues were Twitter and Facebook. For Twitter and Facebook, the link to the questionnaire was posted on the PI’s personal account several times between February and April 2014. In order to promote the link’s reach, I personally asked several close friends to post the ad on their Facebook page with
a message. Several others “liked”, “shared”, and “retweeted” the link on their own accord. A snowball sample of individuals was reached through the “share” option on Facebook and the “retweet” option on Twitter, as each new share or retweet advanced the survey through different individuals’ streams. According to the website muckrack.com, that examines content reach on social media sites, the survey link was shared on Facebook 173 times and retweeted on Twitter 8 times.

The initial pool of herpes specific dating sites contacted were: hwerks.com, positivesingles.com, hmates.com, mpwh.net, afterh.com, STDFriends.com, H-Date.com, and loveHstyle.com. Only one site returned my email request, denying me the opportunity to post my survey on their site, citing site privacy stipulations as the reason for denial. No other site returned my email. Though initially proposed as a potential recruitment venue, this was not successful.

However, the survey was distributed through a variety of other electronic channels during the data collection period. First, several personal contacts sent out the survey link over email listservs including: HEDIR for health educators, SSSStalk which is the listserv for the Society for the Scientific Study of Sexuality, Sexnet, and USF Talk which is an internal school listserv with 800 participants. Instructors for the spring 2014 undergraduate Sex, Health, and Decision Making class also sent out the link to the survey to their students. Dr. Justin Lehmiller, a prominent sexuality researcher who maintains a research blog and website also posted the survey to his webpage (www.lehmiller.com) and blogged about the study after hearing about it through SSSStalk. The survey link was also posted to Reddit in three separate Reddit forums: /surveyresearch, /samplesize, and /gradschool. Additionally, ASHA posted the survey to their research opportunities
 forum. According to responses, the survey also was available through linkedin, askisadora.com, and positivesingles.com, thought these were not sites identified or approached by the PI.

Web-based surveys are cost effective and provide a high level of anonymity for the participant (Neuman, 2006). Using this approach allowed both symptomatic and asymptomatic individuals to access allowing for a larger swath of individuals with genital herpes. Using a web-based surveys also allowed for examining the quality of the data continuously throughout the data collection process through summary reports. This allowed for minor changes to the survey instrument to improve data collection problem while it was still occurring. This is as opposed to paper and pencil surveys in which the quality of the data collected is normally assessed at data entry (Neuman, 2006). Online data collection also eliminated the need for manual data entry into an electronic file suitable for analysis. Not only did this save time, but it can reduce errors associated with miscoding and data entry errors (Neuman, 2006). Another feature of web-based software tools that increases data quality is the ability to prompt the participant regarding questions that must be answered, that they skipped a question, or include built in skip patterns that increase the quality of the data collected by decreasing user error (Dillman, Tortora, & Bowker, 1999).

Drawbacks exist when utilizing a web-based surveying technique. The largest limitation of online surveys is that it is not possible to conclusively identify who is filling out the survey without collecting specific identifying information (Neuman, 2006). Anyone who can access the survey becomes a participant, whether he or she is part of the intended population or not. To reduce the threat of sample validity, several methods were
adopted. A screener was added to the questionnaire so that participants could not determine which combination of questions would gain entry into the full survey instrument. Incentives for participation were also kept low to discourage participation from individuals not in the intended population. Finally, the data collected were rigorously examined for implausible or unlikely response patterns to increase the validity of the data.

This study employed a screener prior to gain access to the full study. The study was advertised as a study about sexual communication in relationships. Only individuals who indicated that they were 1) 18+ and 2) had genital herpes gained access to the full study questionnaire. Additionally, the assumption of the ability to read English underlies the inclusion criteria, as the web-based module was only in English. As there were distinct requirements to gain entry, the chances that someone would haphazardly gain access to the survey were reduced. Survey results were eliminated if the screener was accessed by the same IP address more than three times with varying responses. Cases were also eliminated based on atypical response patterns after examining each on a case by case basis. These cases were eliminated on the assumption that they were bogus cases.

**Measures**

**Stigma.** One must look broadly to measure genital herpes stigma. No herpes stigma scale exists (Breitkopf, 2004). Closely related, the Herpes Attitude Scale measures perceptions of genital herpes (Bruce & McLaughlin, 1986; Fisher, Davis, Yarber, & Davis, 2011). This scale measures attitudes about genital herpes in ways more appropriately suited to a population who has not had a genital herpes diagnosis.
However, there are several other stigma scales that apply to sexually transmitted infections broadly and other more STI disease-specific scales that have been validated (Fisher et al., 2011).

The Berger HIV Stigma scale consists of four factors including personalized stigma, disclosure concerns, negative self-image, and concern with public attitude with HIV (Berger, Ferrans, & Lashley, 2001). Exhibiting high levels of internal consistency reliability and construct validity as evidenced by correlations with commonly used mental health measures, this 40 question scale includes many items that can be easily adapted to measure herpes-related stigma simply by changing HIV to herpes. However, the scale is lengthy and time consuming with several items that do not apply to the genital herpes context. These items typically describe the perceptions or impacts of HIV outside of a sexual relationship context. Whereas HIV can broadly affect one’s overall health and thus broader social interactions, herpes is more confined to relationships of a sexual nature (Breitkopf, 2004). Therefore, items such as “Easier to avoid friendships than worry about telling” do not apply to the genital herpes context.

Wright and colleagues (2007) tested an abbreviated version of the HIV Stigma Scale developed by Berger and colleagues. The revised 10 item scale captured all four dimensions of stigma measured in the original extended scale while maintaining high internal consistency reliability with each subscale scoring a Cronbach’s alpha level of .70 or greater and demonstrating high correlations with the original subscales. Most of the items tested for the abbreviated HIV Stigma Scale were easily adapted to measure herpes stigma simply by changing “HIV” to “herpes” in the item. However, two items did not apply as readily to the herpes context: “I have stopped socializing with some people
because of their reactions of my having HIV” and “I have lost friends by telling them I have HIV.” Both items are part of the Personalized Stigma subscale.

The HIV scale developed by Berger and colleagues (2001) served as the initial pool of items for a herpes specific stigma scale. As the thrust of the current research is to understand stigma, disclosure, and rejection, additional items were taken from the Disclosure and Public Attitudes subscales. Wright and colleagues (2007) also demonstrated that the 40 item scale maintained its psychometric properties when reduced. Therefore, not all items were used in order to moderate survey length. As such a 12 item abbreviate version of these scales was used to measure stigma perceptions. The scale demonstrated high internal consistency reliability (α=.906).

Rejection. No scale currently measures rejection and more specifically, sexual rejection. Scales that deal with rejection in the psychological literature refer to coping with rejection and not perceptions of rejection themselves. Therefore, the assessment of sexual rejection was determined through elements defining a sexual rejection in the qualitative literature. A new scale to measure rejection was not developed. Instead, a list of potential partner reactions taken from the qualitative literature acted as an index of common partner reactions to disclosure and perceptions of rejection.

Pilot Testing

As this is a hard to reach sample, quantitative pilot testing of the measures was not feasible prior to questionnaire launch. Instead, the instrument was assessed for validity and sensitivity using a five phase pretesting process. First, the questionnaire was reviewed by experts in the areas of measurement, human sexuality, sexually transmitted
infections, and disclosure. The doctoral committee served as the expert review board. After integrating suggested changes, phase two, cognitive interviewing, began.

Cognitive interviews were conducted according to the principles outlined by Willis (1999). Cognitive interviewing is a tool that can be used to identify sources of response error in a questionnaire. Cognitive interviews explore the cognitive processes used by respondents to answer survey items. Interviews are conducted with volunteer participants who have characteristics of interest to the questionnaire. The theoretical cognitive underpinnings of cognitive interviewing include:

1) Comprehension of the Question: This aspect of cognitive interviewing attempts to understand the interpretation of an item’s intent and meaning from the perspective of the survey respondent. If a survey respondent does not interpret an item in a way intended by the researcher, the item is subject to clarification and retooling for clarity. Identifying incongruencies between the researcher’s intent behind the question and the interpretation of the respondents’ interpretation serves as a validity check.

2) Retrieval from Memory of Relevant Information: This aspect of the cognitive interview attempts to gauge how difficult an item is to answer. This includes an understanding of what information is necessary to answer the item accurately and the strategies employed by the respondent to recall the information of interest. If an individual struggles to employ an efficient and accurate recall strategy, the question might pose problems.

3) Decision Processes: The decision process includes the concepts of motivation and sensitivity/social desirability. Through this component of the cognitive
interview, the researcher attempts to grasp if the respondent devotes sufficient mental effort to answer the question accurately, as well as identify any desire to answer differently from the truth. If an individual feels drawn to respond in a more socially desirable way, this might be an opportunity to reframe the question to appear less judgmental thereby increasing the validity of responses. As social desirability is a prominent concern for this line of research, particular attention was paid to reactions of cognitive interviewees in this realm.

4) Response Processes: This final category ascertains if the answer or conclusion an interviewee came to is able to map onto one of the response categories provided. This can identify insufficient response options for the item.

Individuals with genital herpes known to the investigator personally served as interviewees for the cognitive interviews. Interviews were conducted over the phone and internet in real time as the candidates do not live locally. Conversations were audio recorded and notes were taken during the interview. Participants were asked to read questions aloud as they clicked through the electronic survey and describe their thought process on answering each question. Additionally follow-up questions were asked as appropriate. Question wording and sensitivity were emphasized with participants and suggestions for question improvement were solicited.

Peer reviews occurred during the 3rd pretesting phase. Eight peers (graduate students, faculty, and research staff) reviewed the survey instrument for wording and accuracy. Between each peer review, changes were made to the survey instrument until there were no additional critiques. An iterative process of review and updating continued until no substantive changes were recommended by to consecutive peer reviewers. Next,
in phase 4, the survey was reviewed for flow (including appropriately functioning skip patterns) and response option availability using a role play scenario of a fictional character provided by the PI.

Finally, in phase 5 of pretesting, two additional cognitive interviews were conducted with individuals with genital herpes in order to review changes made to the questionnaire in the previous phases. One of the interviewees was a new participant, serving as an additional new set of eyes and perspective on the questionnaire. The second participated in the first round of cognitive interviews and was specifically probed about changes made since the first cognitive interview.

**Primary Gaps in the Existing Literature**

Although many studies examine the psychosocial effects of genital herpes, less is known about the patterns of disclosure and the role that perceived partner reaction plays in the disclosure process, including future intentions to disclose. Only qualitative studies have discussed the results of disclosure in the U.S., and data are scattered throughout studies examining the psychosocial ramifications of having genital herpes.

The most comprehensive study of disclosure and perceptions of rejection used a mixed methods approach (Green et al., 2003). This study was conducted through a STI clinic in London, England and examined individual and relationship characteristics associated with disclosure, such as seriousness of the relationship, recency of relationship, and gender. Additionally, it was the first study in the herpes literature to quantitatively assess an individual’s overall perception of his or her partner’s reaction as either positive or negative. However, this study did not however explore: 1) the range of responses a partner might have, 2) how this in turn affects perceptions of partner
response, and 3) subsequent perceptions of rejection, or 4) use a defined theoretical framework. This study expands on the work of Green and colleagues by addressing these four identified gaps.

Quantitative studies have yet to examine what characteristics of the individual and/or relationship that is associated with disclosure among individuals living with genital herpes in the U.S. Notably studies have not focused on the role of rejection in disclosure, despite a heavy emphasis on this concept in the qualitative literature. Furthermore, the role of partner’s reaction on future intentions to disclosure has been explored to only a limited extent. The impact of a partner’s reaction has on the intention to disclose in the future has yet to be explored using a quantitative approach. This study builds on findings from qualitative literature domestically and quantitative literature from the international stage to understand disclosure further.

**Research Questions**

**Specific Aim 1:** Identify individual and relationship characteristics that are associated with genital herpes disclosure at last sex in sample of individuals with genital herpes.

a. What is the prevalence of genital herpes disclosure at last sex among this sample?

b. What individual-level characteristics including age, gender, race, symptomatic versus asymptomatic testing, stigma perceptions, sexual orientation, and time since diagnosis are associated with genital herpes disclosure?
c. What relationship characteristics including time in relationship, type of relationship, and sexual progression are associated with genital herpes disclosure?

d. When in the sexual progression of a relationship do individuals disclose?

e. Are expectations of a partner’s reaction associated with the decision to disclose?

f. Which combination of individual and partner characteristics best predict disclosure?

g. What are reported reasons for disclosure and non-disclosure?

Specific Aim 2: Understand how past partner reactions to a genital herpes self-disclosure are related to future intentions to disclose.

a. What reactions are associated with future intentions to disclose?

b. Is the overall assessment of a partner’s reaction associated with future intentions to disclose?

c. Is the perception of rejection at last disclosure associated with future intentions to disclose?

Significance

Current counseling messages and disclosure recommendations are not substantiated by existing research. Messages regarding disclosure fears and managing expectations of disclosure supported by the most prominent public health organization in the country are anecdotal and without scientific support. CDC recommendations promoting disclosure also do not discuss psychosocial repercussions or public health
benefits of this strategy. This study explored perceptions of partner reactions to disclosure in order to better understand the nature of disclosure aftermath.

The findings from this research may have numerous implications for health education messaging. Findings can help shape health education programming regarding facilitating a successful disclosure. Clinic-based interventions for coping with a genital herpes diagnosis will vary based on the extent to which fears of rejection match the realities of sexual denial as a result of disclosure. If fears of rejection match intentions regarding sexual interaction held by those without a genital herpes diagnosis, then interventions must maintain the status quo of stressing the legal and ethical implications of disclosure. However, if expectations of rejection do not match intentions of potential sexual partners, then interventions can evolve around the idea of matching expectations matching realities rather than fearing for the worst reaction to a disclosure.

The present study is timely, as recommendations for asymptomatic testing are still evolving and asymptomatic testing rates are increasing. This potentially means that many with newly diagnosed asymptomatic genital herpes face disclosure decisions. This is important since the impact of the disease for these individuals completely lacks a personal physical element, leaving consequences of testing to be interpersonal.

This study is unique because it is the first study to examine partner’s reactions to a disclosure in a primarily U.S. sample using a quantitative approach. Findings also provide the first estimates, known to date, of rejection perceptions.
Theoretical Approach

Theoretical Conceptualization

Existing studies examining disclosure of genital warts or genital herpes to one’s partner are largely qualitative in nature, and without an *a priori* theoretical framework. From these qualitative studies, little formal theory development has occurred. However, general groupings of barriers and facilitators of disclosure have been explored, and *stigma* is a recurrent theme (Bickford, Barton, & Mandalia, 2007; Cunningham, Tschann, Gurvey, Fortenberry, & Ellen, 2002; Melville et al., 2003; Newton & McCabe, 2008b; Perrin et al., 2006; Scrivener et al., 2008).

Stigma Theory evolved from Goffman’s (1963) original work regarding the stigmatized “other”. A stigma by nature indicates a devalued position or a spoiled identity (Goffman, 1963). Realizing that one has a condition that is stigmatized separates them from the rest of “normal” society. Others distance themselves from the stigmatizing condition through stereotyping and separation. Further conceptualization of stigma has been seen throughout the literature.

Building on Goffman’s work, Link and Phelan (2001) conceptualized stigma as having five core elements. Incorporating the core underpinnings of Goffman’s stigma premise, Link and Phelan also asserted that 1) stigma creates a divide between “us” and “them”. The stigma concept also 2) incorporates the ability to recognize and identify human differences. 3) Stereotyping occurs in which a label associated with an undesirable condition. Being associated with a stigmatizing condition incurs a 4) status loss and 5) discriminatory behavior.
The role of discrimination in the conceptualization of stigma has been challenged. In her reassessment of the conceptualization of stigma, Deacon (2006) suggested that discrimination is just one form of status loss rather than being inherent to the concept stigma itself. Deacon viewed stigma in terms of Joffe’s conceptualization of stigmatized illnesses (Joffe, 1999), which includes “1) Illness is constructed as preventable or controllable; 2) ‘Immoral’ behaviors causing the illness are identified; 3) The behaviors are associated with ‘carriers’ of the illness in other groups, drawing on existing social constructions of ‘other’; 4) Certain people are thus blamed for their own infection; and 5) Status loss is projected onto the ‘other’, which may (or many not) result in disadvantage to them.” (Deacon, 2006, p. 421). This especially applies in micro-levels of experiences of stigma, such as in interpersonal relationships.

In Breitkopf’s application of Stigma Theory to genital herpes, a stigma is intensified if it is believed to be acquired as a result of one’s actions or is the responsibility of the one possessing the stigmatizing condition (Breitkopf, 2004). Individuals with genital herpes experience enhanced stigma due to their active role in acquiring the stigmatizing condition, ties with sexual activity specifically make the stigmatizing condition even more taboo. Breitkopf also highlighted that STIs present a unique way to examine stigma, as the stigmatizing condition itself is not readily apparent (Breitkopf, 2004). For instance, genital herpes can remain hidden from the public eye and symptoms of the virus only appear sporadically, if at all (Centers for Disease Control and Prevention, 2006). Rather than simply coping with the stigma associated with genital herpes on a day to day basis, such as someone with a readily apparent stigmatizing condition (e.g., speech impairment), individuals with STIs have to manage and protect
information regarding their condition. It therefore becomes a situation of discretionarily exposing themselves as a stigmatized other. Due to the concealability of having an STI, one is not automatically discredited, rather they are discreditable (Newton & McCabe, 2005). The process of disclosure is the process of revealing one’s stigmatized condition and potentially positioning oneself as an “other.” Individuals with genital herpes often can maintain anonymity for a lifetime due to the regionalized nature of their infection and lack of need to tell non-romantic others.

Stigma Theory provides a natural underpinning to understanding disclosure reasoning among individuals with genital herpes. Genital herpes alone, though a stigmatizing disease, does not come with all of the consequences of having a negatively viewed trait because it is a concealable condition. It is not until one discloses their HSV status to others when they become at risk for being viewed negatively. Therefore, if one does not disclose, s/he maintains their “normal” status. However, it is noted that not everyone with a traditionally stigmatizing condition, such as a sexually transmitted infection, accepts the societal view of their condition (Breitkopf, 2004). This theory suggests that individuals who internalize the negative stigmas associated with STIs, and more specifically genital herpes, will report lower levels of satisfaction and might be less likely to disclose their condition to potential partners.

Prior Stigma Theory Applications

Stigma Theory has been used throughout the literature examining disclosure with STIs. Cunningham and colleagues (2002) found that stigma internalization regarding sexual behavior was associated with a reduction of care seeking behaviors among young women. Stigma internalization refers to accepting negative societal beliefs about a
condition as a perceived public truth. Women who anticipated negative reactions by medical personnel were least likely to disclose sexual behaviors. Similarly, in interviews Cunningham and colleagues (2007) found a reluctance to disclose an STI diagnosis among adolescent females despite knowledge of the need to inform potentially infected partners of their diagnosis. This reluctance was exhibited due to the psychosocial costs of disclosure. What is interesting to note, is that the stigma associated with their conditions was transitory, as these women all were diagnosed with curable infections of either chlamydia and/or gonorrhea. Therefore, informing partners had a clear physical benefit of treatment if infected. However, unlike curable STIs, disclosing a genital herpes status is not transitory, as the virus cannot be cured (Centers for Disease Control and Prevention, 2010a).

Stigma internalization is an important concept. Numerous scales exist to measure stigma. Studies that have examined relative stigma of various diseases sometimes focus on six elements of a stigmatizing condition, including concealability, course, strain, aesthetic qualities, cause, and peril. Studies using these criteria have found that STIs rank among the most stigmatized conditions (Jones et al., 1984; Patrick et al., 2004).

**Study Application**

In application of the theory to the present research, the extent to which one identifies with the stigma associated with genital herpes may moderate disclosure and rejection perceptions. Those who internalize higher levels of HSV stigma might be less likely to disclose to a partner or report worse expectations of partner reaction. Additionally, those who experience a rejection as a result of a genital herpes disclosure
might report higher levels of genital herpes stigma. Both of these might affect future intentions to disclosure.

**Terms**

**Definitions**

Sexually transmitted infection (STI): Belonging to a category of conditions that are commonly grouped together because they can be transmitted through sexual contact, also commonly referred to as sexually transmitted diseases (STDs).

Genital herpes: Genital herpes refers to having herpes simplex virus infection (HSV) in the genital (vaginal, penile, or anal) region of the body.

Disclosure: Disclosure is the process of telling someone about having a sexually transmitted infection.

Partner notification: Partner notification is a larger umbrella term of strategies used to notify individuals about sexually transmitted infections, either among those potentially already exposed or those who might be at future risk.

Genital warts: Genital warts refers to low-risk human papillomavirus (HPV) infection in the genital (vaginal, penile, or anal) region of the body.

**Terminology Applications**

Different organizations use the terms sexually transmitted infection (STI) and sexually transmitted disease (STD) to refer to the same group of conditions that are transmitted through sexual contact. These terms are used interchangeably typically depending on author or organization preferences. For this study, the term sexually transmitted infection is used throughout for consistency.
Associations between Individual and Relationship Characteristics and Genital Herpes Disclosure

Abstract

Disclosure is one strategy recommended for controlling the spread of genital herpes. This study explores determinants of genital herpes disclosure with one’s most recent sexual partner using an online questionnaire (N=93). The majority of participants (80.4%) disclosed. Among non-disclosers, fear of a negative partner reaction was the primary reason for non-disclosure. Age, relationship commitment, time in a relationship, and expectations of a partner’s reaction were significant predictors at the bivariate level. Reaction expectations and relationship commitment remained significant in logistic regression modeling. Findings indicate that future disclosure research should focus on relationship context and managing negative expectations to increase disclosure.

Background

Genital herpes is one of the most common sexually transmitted infections (STIs) in the United States (Centers for Disease Control and Prevention, 2010a). Genital herpes is a common, incurable skin infection caused by herpes simplex virus (HSV) types 1 and 2 that is typically transmitted through skin-to-skin contact. Symptoms of genital herpes range considerably but are most commonly recognized as painful, red sores in the anogenital region.

National statistics examine HSV-2 seroprevalence to estimate the prevalence of genital herpes in the U.S. Data from the National Health and Nutrition Examination...
Survey (NHANES) suggest that the prevalence of genital herpes declined from 21% in the 1988-1994 cycle to 17% in the 1999-2004 cycle (Xu et al., 2006) and leveled off to 16.2% in the 2005-2008 cycle (Xu et al., 2010). However, HSV-2 seroprevalence as the indicator of population genital herpes underestimates the actual prevalence of genital HSV (Centers for Disease Control and Prevention, 2012b). Though presence of HSV-2 antibodies almost always indicate genital infection (Centers for Disease Control and Prevention, 2010a), HSV-1, historically associated with oral herpes, is a growing contributor to genital herpes cases (Lafferty et al., 2000; C. M. Roberts et al., 2003; Wald, 2006). The Centers for Disease Control and Prevention (2006) suggests that up to 50% of genital herpes cases could be due to HSV-1. As such, conservative estimates report that more than one in six Americans have genital herpes based on HSV-2 seroprevalence.

Despite the common nature of genital herpes, many individuals with the infection are not aware they carry the virus (Centers for Disease Control and Prevention, 2010a; Xu et al., 2010). Studies suggest approximately 80% of individuals with genital herpes have not received a clinical diagnosis, and as many individuals are asymptomatic or display low level symptomology (Xu et al., 2010). Individuals who are aware of having herpes face a variety of physical, emotional, and social health issues. From a physical health standpoint, genital herpes is a minor medical issue, a transient skin rash with few, if any, physical consequences (Centers for Disease Control and Prevention, 2010a). The social and emotional repercussions of contracting an incurable and highly stigmatized STI, however, can be considerable (Green, 2004; Mark et al., 2009; Melville et al., 2003; Newton & McCabe, 2008a).
Individuals with genital herpes often report that the social repercussions of herpes are the most worrisome aspect of genital herpes infection (Barnack-Tavlaris et al., 2011; Bickford et al., 2007; Melville et al., 2003; Swanson & Chenitz, 1993). Much of the psychosocial distress is derived from the stigma attached to genital herpes. Goffman (1963) first conceptualized stigma as being associated with a devalued position in which someone is separated from “normal” society and relegated to the position of the “other”. More recently, Link and Phelan (2001) referenced status loss in their conceptualization of stigma. When applying stigma theory to genital herpes disclosure, Breitkopf (2004) noted that a stigma is intensified if the medical condition is considered preventable. As the preventable action or behavior in the case of genital herpes is sexual activity, an additional layer of stigma is applied due to the taboo nature of sexuality in American society (Inhorn, 1986). These factors, as well as negative and sensational media attention, place genital herpes among the most stigmatized health conditions (Breitkopf, 2004; Posner, 2000; R. E. L. Roberts, 1997).

Despite possessing a highly stigmatized, incurable, and transmissible virus, someone with genital herpes can protect themselves from the status loss associated with genital herpes through concealing their stigmatizing condition. Rather than coping with the stigma associated with genital herpes on a day-to-day basis, such as someone with a readily apparent stigmatizing condition (e.g., speech impairment), individuals with STIs have to manage and protect information regarding their condition (Lee & Craft, 2002). People with genital herpes can maintain anonymity for a lifetime because of the regionalized nature of their infection. Due to the concealability of having an STI one is not automatically discredited; instead, they are discreditable (Newton & McCabe, 2005).
It therefore becomes a situation of discretionarily exposing themselves as a stigmatized “other”. As such, allowing others to find out is a common concern (Green et al., 2003; Newton & McCabe, 2008b), even among individuals who have never had physical signs of the virus (Rosenthal et al., 2006).

Individuals with genital herpes face the social ramifications of their disease when they disclose their genital herpes status to a potential partner (Bickford et al., 2007; VanderPlate & Aral, 1987). Disclosure is the process of revealing one’s stigmatized condition and potentially positioning oneself as an “other” (Breitkopf, 2004). Disclosure puts the person with genital herpes at risk for rejection. Fear of rejection is one of the most commonly reported worries of individuals with genital herpes (Green et al., 2003; Melville et al., 2003; Newton & McCabe, 2008b). Transcripts from herpes support chat rooms indicate that the most commonly asked questions address to whom and when to disclose (Gilbert & Omisore, 2009). Disclosure becomes paramount when initiating relationships due to the risk of transmission, because genital herpes is highly transmissible through sexual contact. As the partner is at risk for also acquiring the stigmatizing condition, this can fundamentally alter the relationship. As part of the arsenal of prevention efforts to reduce the transmission of genital herpes, the Centers for Disease Control and Prevention (2010a) recommends that all individuals with genital herpes disclose their genital herpes status to potential partners prior to sexual initiation.

Despite the potential for rejection, individuals with genital herpes disclose to partners for a variety of reasons. Qualitative data suggest that some disclose for moral reasons, such as respect and honesty (Green et al., 2003; Lee & Craft, 2002; Newton & McCabe, 2008b). Transitions in relationship seriousness, such as sexual progression of
the relationship or moving in together (cohabitation) can prompt disclosure (Green et al., 2003; Lee & Craft, 2002; Newton & McCabe, 2008b). Other people with genital herpes report ending relationships or slowing relationships down in order to avoid or delay disclosure (Lee & Craft, 2002; Newton & McCabe, 2008b). People with genital herpes are also more likely to disclose if they expect a more positive response (e.g., a partner being understanding) as opposed to a negative response (e.g., disgust) from a partner (Green et al., 2003; Lee & Craft, 2002). Some people with genital herpes conceptualize disclosure as part of disease prevention. Gilbert, Scanlon, Peterson, and Ebel (2005) reported that 50% of individuals with genital herpes believed that disclosure was effective at reducing herpes transmission risk; although Green and colleagues (2003) did not find this to be a prominent reason for actual disclosure.

**Purpose**

Though the qualitative and mixed methods genital herpes disclosure literature has identified and discussed the many reasons as to why one does or does not disclose to a sexual partner, the relative importance of each of these factors has yet to be determined. This study quantifies issues highlighted in the qualitative literature to identify, among people with genital herpes, which factors are most important to genital herpes disclosure and non-disclosure, including the role of stigma and reaction expectations. The purpose of this study was to 1) identify common reasons for disclosure and non-disclosure, 2) determine which individual and partner characteristics are associated with disclosure, and 3) understand when in the romantic and sexual progression of a relationship disclosure occurs.
Methods

All study procedures and instruments were reviewed and approved by the lead author’s human subjects research/institutional review board (IRB).

Participants and Procedures

Individuals were invited to participate in a study about “Understanding Sexual Communication in Relationships” through a variety of online venues, including social media websites (e.g., Twitter, Facebook, Reddit, LinkedIn) and academic and professional email lists. Interested individuals were asked to complete an initial set of questions to determine eligibility for study participation. These initial questions served as a web-based screener for study inclusion criteria. Individuals who identified as 18 years old or older and as having genital herpes in the screener were then asked if they would be willing to participate in a study examining the impact of genital herpes on sexual relationship communication. Individuals agreeing to participate gained access to the full online questionnaire. For the present study, 1,622 people responded to the screener survey, between February 14th and May 1st, 2014. Of those individuals, 109 qualified for the study after data cleaning for missing data (e.g., individual entered the survey but did not answer any questions) and duplicate cases (e.g., multiple entries from the same IP address within 1 hour of each other with minimal content differences). After completing the screener, 105 agreed to participate. Data were further cleaned for invalid responses (e.g., reporting they answered dishonestly or reported the same value throughout large survey blocks irrespective of switches in the positivity or negativity of the question). Only individuals 18+, self-reporting as having genital herpes, and who have reported having at least one oral, anal, or vaginal sex partner since realizing they
had genital herpes remained in the final dataset ($N = 93$). Participants were offered the opportunity to be entered into a raffle for a $25.00 gift card for their time.

**Sample Demographics**

The majority of participants identified as White (80.4%), female (79.6%), having a four-year college degree or higher (87.1%), and living in the United States (93.5%) (Table 1). The sample primarily identified as heterosexual or straight (73.9%), with 16.3% identifying as bisexual, 4.3% homosexual, gay, or lesbian, and 5.4% other. Age ranged from 18 to 73 ($M = 39.2$, $SD = 13.5$). The majority of participants accessed the survey through Facebook (47.3%) and email (42.9%).

**Instrumentation**

All items were developed after a comprehensive review of the literature. Items underwent a multi-method, five phase pretesting period to assess validity and reliability. Phases included: 1) expert review, 2) cognitive interviews with the target population, 3) peer review, 4) role playing a fictional character through the questionnaire, and 5) a final round of cognitive interviews with the target population to assess changes made to item wording in previous phases. Final item wording and response options reflect the findings from this pretesting process.

**Disclosure.** Individuals who reported that they had at least one oral, sexual, or anal sex partner (since realizing they had genital herpes) were asked, “Did you tell the last person you had sex with that you have genital herpes? This includes oral, anal, or vaginal sex. This could be at any point in your sexual relationship with this person-telling could have occurred before or after sex. This could also be someone you are currently seeing.” Response options included: No, and I don’t plan to tell them, No, but I
might tell them in the future, No, but I will definitely tell them in the future, and Yes. The variable was dichotomized into Yes and No.

**Individual-level variables.** Race/ethnicity, age, sex, sexual orientation, time (in months) since diagnosis, outbreak frequency, type of diagnosis, medication use, and stigma internalization were the individual-level predictors of disclosure explored. Several demographic variables were dichotomized to meet cell count expectations for bivariate analyses.

Race/ethnicity was measured using the following question, “What is your race/ethnicity? You may choose more than one option”. Categories provided were White/Caucasian, Black/African American, Hispanic/Latino, Asian, Native American, Pacific Islander, and Other. For analyses, the variable was recoded into White/Caucasian (only) versus Other racial/ethnic category.

Age was measured as a continuous variable in which individuals typed in a numerical response to the question “What is your age?”

Sex was measured by the question “What is your sex?” with response options of Male, Female, and Other.

Sexual orientation was measured using the item “What is your sexual orientation?” with response options of Heterosexual or straight, Bisexual, Homosexual, gay, or lesbian, and Other. Values were dichotomized into Heterosexual or straight and Other for analysis to meet bivariate cell count expectations.

Time since diagnosis (in months) was calculated by converting responses from the question “When did you find out that you had genital herpes?”, which had a drop-down selection menu for month and year into a continuous months since diagnosis
variable. Time since diagnosis was calculated by establishing the difference between the survey start date and the month and year provided. For the six individuals who did not provide a month, but only a year, the midpoint of June of that year was utilized for calculations.

Outbreak frequency was measured using the item “Approximately how often do you have herpes outbreaks?” with response options of I have never had an outbreak or genital herpes symptoms, I haven’t had an outbreak since my very first time getting genital herpes, Less than once a year, 1 to 2 times a year, 3 to 5 times a year, and 6 or more times a year. Outbreak frequency was dichotomized for analyses to Less than once a year and At least once a year to reflect individuals who consistently have symptomatic outbreaks and those who do not.

Medication use was measured by the item “Do you take any medication for genital herpes?” with the response options of Yes, daily suppressive treatment to prevent outbreaks, Yes, when I notice signs of an outbreak or during an outbreak to shorten its length, No, and Other (Please describe). Individuals who selected the “Other” option and indicated they were past users of medication but not current users were recoded as “No.” The variable was dichotomized for analyses into Daily suppressive medication and Other, as daily suppressive medication can reduce the risk of genital herpes transmission (Centers for Disease Control and Prevention, 2010a).

Condom use was measured by the item “Since discovering you had genital herpes, how often have you used condoms when having anal or vaginal sex?” with response options on a 5 point scale ranging from 1 = Never to 5 = Always.
Herpes stigma internalization was measured using an adapted version of the revised HIV Stigma Scale (Wright et al., 2007), including 12 items measured on a 5 point scale from $1 = \text{Strongly disagree}$ to $5 = \text{Strongly agree}$. Higher mean scores indicate higher herpes stigma internalization. In the present study, the scale demonstrated good internal consistency reliability ($\text{Cronbach } \alpha = .91$).

**Partner characteristics.** Time in relationship, relationship type, and anticipated partner reaction were examined. Time in relationship was measured by the item “Approximately how long did or has your sexual relationship last(ed) with this person?” divided into time categories of Less than 1 week, 1 week to less than 1 month, 1 month to 3 months, 4 to 6 months, 7 months to less than 2 years, 2 to 5 years, and 6+ years. These categories emerged as meaningful relationship time demarkers during the multi-phase pretesting of the survey instrument according to pretesting interviews and critiques. For analyses, these time categories were recoded into Less than 1 week to 3 months, 4 months to less than 2 years, and 2 years or more to reflect longer and shorter term relationships while adequately meeting expected cell counts necessary for analysis. Relationship type was measured by the item “How would you best describe your relationship with the last person you had sex with at the time you last had sex?” Response options were One night stand, Booty call, Friends with benefits, Dating, Boyfriend/girlfriend, Fiancé, Husband/wife, an ex, and Other. Responses were recoded into the bivariate categories of socially committed and not socially committed. Respondents who reported their relationship type as girlfriend/boyfriend, husband/wife, longtime partner, or checked “Other” and described a long term committed relationship (e.g., committed partner of 25 years) were recoded as socially committed. Individuals who reported their relationship
type with the last person they had sex with as *booty call, friends with benefits, dating, an ex,* and *second lover* were recoded as *not socially committed* for analyses. Finally, anticipated partner reaction was measured via a single item for both disclosers and non-disclosers at last sex on a scale from one to five (1 = *Very positively* to 5 = *Very negatively*). Disclosers were asked “*BEFORE you told the last person you had sex with about having genital herpes, how did you EXPECT your partner to react to telling them?*” Non-disclosers were asked “*In your opinion, how do you EXPECT the last person you had sex with would have reacted if you had told them about having genital herpes?*”. Responses from both items were combined into a single disclosure expectation variable.

**Data Analysis**

Data were exported from the online survey system Qualtrics (Qualtrics, 2013) and analyzed using SPSS version 22 (IBM Corp., 2013). Bivariate associations with disclosure were explored using chi-square and Fisher’s Exact tests for categorical variables, and continuous variables were analyzed using independent means t-tests. Characteristics associated with disclosure at the bivariate level were entered into a logistic regression model to examine the relative importance of various individual and relationship characteristics for explaining disclosure outcomes. Backward elimination using the Wald statistic determined statistically significant predictors of disclosure. All analyses were assessed at the $p < .05$ significance level, and odds ratios and 95% confidence intervals were reported for all logistic regression analyses.
Results

The majority of participants (80.4%) disclosed. Age was the only individual-level characteristic associated with disclosure at the bivariate level, $t(90) = 2.78, p = .007$ (Table 2). The mean age for individuals who reported not disclosing at last sex was 31.44 years ($SD = 11.70$), and the mean age for individuals who did disclose was 40.93 years ($SD = 13.32$).

All relationship variables were statistically significantly associated with disclosure at last sex (Table 2). Relationship type was associated with disclosure to one’s last sexual partner ($p = .003$). Respondents who reported being in socially committed relationships, such as boyfriend/girlfriend, husband/wife, and longtime partners were more likely to have disclosed than those in non-socially committed relationships. Time in relationship was also associated with disclosure to one’s last sexual partner, $X^2(2) = 7.47, p = .024$. Respondents reporting shorter relationship lengths (less than one week to three months) disclosed at lower rates than those in relationships lasting two or more years. Expectations of a partner’s reaction to a disclosure was also associated with the decision to disclose; respondents who did not disclose expected their partner to react more negatively than those who did disclose, $t(49.2) = -5.64, p < .001$.

When predicting disclosure in the binary logistic model, expectations of a partner’s reaction ($AOR = .20, 95\% CI .074-.539$) and relationship type ($AOR = 8.31, 95\% CI 1.96-35.32$) remained significant, explaining 45.2% of the variance in disclosure. For each one point increase on the expectations scale towards a more negative reaction, the odds of disclosure decreased by 80%. Individuals in socially committed relationships had 8.31 greater odds of disclosure than those not in socially committed relationships.
To address the third purpose of the paper, to understand disclosure timing, bivariate relationships between romantic and sexual relationship activities and disclosure were examined, and frequencies of disclosure prior to these activities are presented. There were several differences in the sexual and relationship progression between respondents who reported disclosure and those who did not. Respondents who disclosed were significantly more likely to have: gone on a first date (p = .003), stopped dating other people (p < .001), said “I love you” (p = .020), reported their partner said “I love you” (p = .008), got engaged (p = .030), and got married (p = .025) to their last sexual partner than expected by chance alone. Regarding the sexual progression of the relationship, only participating in anal sex had a significant association with disclosure (p = .030). Those who reported anal sex with their last sexual partner reported higher levels of disclosure with their last sexual partner than expected.

Many individuals who disclosed did not do so until after they had engaged in numerous relationship building and sexual activities with their last sexual partner (Figure 1). Among those who reported disclosure at some point to their last sexual partner and who reported receiving oral sex (n = 56), 58.9% disclosed prior to receiving oral sex. The prevalence of disclosure prior to receiving oral sex among those who received oral sex was higher than the prevalence of disclosure before performing oral sex (45.6%) among those who reported performing oral sex. Among those who disclosed and reported having vaginal sex (n = 58), 58.6% disclosed before engaging in vaginal sex. Approximately 56% of those who reported having anal sex and disclosing to their partner (n=32) disclosed prior to engaging in anal sex.
The majority of respondents selected more than one reason for their decision to disclose (Range 0 to 9, $M = 6.76$, $SD = 3.41$) or not disclose (Range 0 to 15, $M = 5.22$, $SD = 2.41$) (Table 3). Individuals were asked to select all of the reasons they decided to tell their last sex partner about having genital herpes, as well as what was their primary reason for disclosure was. The most common reasons reported for disclosure when asked to select the primary reason for disclosure were *I wanted to be honest; To protect my partner from getting herpes; and It’s my partner’s right to know*. Among those who did not disclose to their last sex partner, when asked to select a primary reason for non-disclosure the most common reasons were *I was concerned my partner would react badly; I was ashamed; and I was concerned that my partner would have rejected me*. There was more dispersion of primary reasons among those who did not disclose compared to those who did.

**Discussion**

The purpose of this study was three-fold. First, the goal was to understand the relative importance of various reasons for and against disclosure highlighted in the qualitative literature. Second, it was to determine what individual and partner level statistics are significantly associated with the decision to disclose. The third purpose was to better understand the role of disclosure timing in the decision to disclose.

The current study confirms several themes found throughout the qualitative and mixed methods research on genital herpes disclosure. Similar to previous qualitative studies, common reasons for disclosure were a partner’s right to know and honesty (Lee & Craft, 2002; Newton & McCabe, 2008b). Also, confirming findings from qualitative literature (Green et al., 2003; Newton & McCabe, 2008b), the most common reasons for
non-disclosure were based on expectations that a partner would react negatively to the disclosure, with the majority of participants reporting that fear of rejection and a partner reacting badly were the primary reasons for non-disclosure. Contrary to conclusions by Green et al. (2003), a desire to protect one’s partner from genital herpes was commonly selected as a primary reason for disclosure.

Study findings suggest that relationship characteristics are more important than individual characteristics in the decision to disclose. All relationship level characteristics including relationship type, time in a relationship, and expectations of the potential negativity of a partner’s reaction were associated at the bivariate level, whereas age was the only individual-level predictor of disclosure at the bivariate level. When predicting disclosure in multivariable analyses, only relationship level characteristics remained significant with relationship type and expectations of a partner’s reaction accounting for 45.2% of the variance in disclosure decision. Unlike previous work by Bickford and colleagues (2007), stigma was not significantly associated with genital herpes disclosure.

As a relationship becomes more serious and committed, individuals are more likely to disclose. Individuals who reported their relationship with their last sex partner as being one that is more socially committed, such as husband/wife, boyfriend/girlfriend, or longtime partner were more likely to disclose. Individuals in longer relationships were also statistically more likely to disclose than those in shorter relationships. This pattern of increased disclosure among individuals in more committed relationships can also be seen through examining disclosure within the romantic and sexual progression of a relationship. Among individuals who demonstrated a more romantic pattern of relationship building, including relationship milestones such as a first date, exclusivity,
an engagement, or marriage, disclosure was reported more than expected. This is consistent with findings by Green and colleagues (2003), which suggest that relationship milestones may prompt disclosure, and that disclosure is more likely to occur in serious, longer term, and committed relationships (Bickford et al., 2007; Green et al., 2003).

This pattern did not hold true, however, for individuals in the sexual progression of a relationship. If conceptualizing sexual progression as a series of acts that lead up to, or culminate, in penetrative sex, which is disputable, there was not a statistically significant association with sexual progression and disclosure. Patterns of disclosure matched expectations for disclosure distributions, with the exception of anal sex. Among individuals who disclosed and reported participating in the following activities with their last sex partner, 20% disclosed before the first kiss, 33.9% before they stimulated their partner’s genitals with their hands, 40.7% before their partner stimulated them with their hands, 45.6% before performing oral sex on their partner, 58.9% before they received oral sex from a partner, 58.6% before vaginal sex, and 56.3% before anal sex. There is a clear trend with disclosure with more “serious” forms of sexual interaction. Perception of transmission risk may also affect the decision to disclose as individuals are less likely to disclose before providing digital and oral stimulation to a partner and demonstrate increased disclosure before their partner performed these same activities. However, rates of disclosure after sex fall within the wide range of disclosure timing among other studies of sexually transmitted infection disclosure, which found anywhere between 16% (HIV disclosure among men who have sex with men and women) and 69% (genital wart disclosure among clinic attendees) of disclosures occur after sex (Green et al., 2003; Keller et al., 2000; McKay & Mutchler, 2011, Scrivener et al., 2008; Wald et al., 2006).
Collectively, these diverse rates of disclosure after sex suggest that when to disclose may be impacted by different characteristics than the global decision to disclose.

The expectation that a partner would react negatively was an important expressed reason for why individuals in this study did not disclose, with almost 9 in 10 non-disclosers reporting that *I was concerned my partner would react badly* and *I was concerned that my partner would have rejected me*. Participants who did not disclose also reported a more negative expectation of their partner’s reaction (*M* = 3.28 vs. *M* = 4.47), indicating that many more non-disclosers felt their partner would react *very negatively*. Additionally, the odds of disclosure decreased by 80% for each one point increase on the negativity scale in the logistic regression model. Though the majority of individuals who disclosed expected their partner would react *somewhat negatively*, the majority of individuals who did not disclose indicated that their partner would react *very negatively*. As such, simply expecting a negative reaction does not prevent disclosure. However, the extent of the expected negativity may have had considerable impact on the decision to disclose. These findings corroborate findings in the HIV literature, which suggest expectations of a negative partner response are associated with lower levels of disclosure (Obermeyer, Baijal, & Pergurri, 2011). Future studies should examine what constitutes a “very negative” response and assess how reliably individuals can predict receiving a response of this type.

In order to increase overall levels of disclosure, it is important to address positive sexual communication in sexual relationships, broadly defined. Three-quarters of non-disclosers reported that one of the contributing reasons for not disclosing was that *They didn’t ask*. This informal policy of “Don’t ask, don’t tell” can also be found in HIV
disclosure literature (Gorbach et al., 2004). As such, it is important to highlight that starting sexual health conversations should be both partners’ responsibility, not just the partner who has something to disclose. The assumption that an individual with an STI will automatically disclose to sexual partners needs to be addressed in sexual health programming; just because a conversation about STIs has not occurred in a sexual relationship does not necessarily mean that neither party has something to discuss. The burden of the disclosure conversation should not be placed solely on those with an STI, as this can increase the fear and anxiety associated with telling a partner. Disclosure should occur within a broader conversation about the desire for sex, sexual likes and dislikes, and protections to be used. Therefore, sexual communication skills are necessary for both parties. Teaching strategies and techniques to address this topic in a variety of sexual relationships is essential, as oftentimes these conversations only happen among committed or romantic partners due to their structure and need for trust to be apparent (Green et al., 2003). The same in-depth conversation approach may not be appropriate for more casual relationships.

Disclosure timing is another area to explore and address. Among individuals who disclosed in this study, the disclosure often occurred after engaging in sexual activities that could potentially transmit genital herpes. More than 40% of individuals who disclosed did so after receiving oral sex, or engaging in vaginal or anal sex. This is similar to previous studies of genital herpes disclosure after sexual initiation (46%; Wald et al., 2006) and genital warts disclosure after sexual intercourse (31%; Keller et al., 2006). In research examining partners’ reactions to disclosure, Williams (2009) found that disclosing one’s genital herpes status after engaging in sexual activity was viewed
more negatively, often leading to feelings of resentment with the perception of being lied to. For both psychological and biological reasons, it is better to disclose one’s STI status prior to engaging in sexual activity. Future studies should seek to understand disclosure timing better. This study is not devoid of limitations. This study is a cross-sectional, anonymous online survey; therefore, causality cannot be determined. However, findings largely corroborate themes identified in qualitative literature, and as such provide a more robust understanding of the nature of genital herpes disclosure. Sample limitations also exist. For example, participants were recruited through online venues, including personal and professional contacts through email lists and social media sites, resulting in a convenience sample that is largely well-educated, White, and female. Many of the respondents reported being in steady committed relationships, including 43% describing their last sex partner as husband/wife. As such, the sample is not representative of all individuals with genital herpes and may not be similar to individuals who are single and still actively navigating dating, or who are men, less educated, and members of minority communities.

However, participants in the present study did not self-select to be in a genital herpes specific study, as the research was advertised more broadly as a study about understanding sexual communication in relationships, potentially enhancing sample validity and diversity. This study also adds to the body of literature on genital herpes disclosure, as the recruitment method potentially taps into a segment of the genital herpes population not previously reached through studies which recruited from clinics and support groups, both electronic and physical. Finally, this is the first study of genital herpes disclosure using a primarily U.S. sample, which could potentially have important
implications for stigma, as perceptions of sex in the U.S. often are more conservative than other industrialized nations.

This study builds on previous work, confirming the robustness of many of the dominant themes in the qualitative literature regarding reasons for genital herpes disclosure. In addition to confirming dominant themes, the relative relationship between different predictors of disclosure were established, clearly demonstrating the need to analyze disclosure in the context of a partner specific basis, rather than an individual identity and decision making process. These findings have important implications for individuals trying to increase disclosure rates. Individuals who expect a very negative reaction are less likely to disclose to a partner, regardless of length of relationship. Sexual health promotion and STI interventions should focus on expectation management in order to increase disclosure rates across relationship types.

Findings also have important implications for reducing the transmission of genital herpes via disclosure. Results from the present study suggest that successful disclosure often occurs after one has already engaged in numerous sexual activities that can transmit the herpes virus. As such, positioning disclosure as a herpes prevention method fails to capture the core reasons individuals do and do not disclose. Individuals seeking to reduce transmission rates should likely focus on other prevention avenues to reduce transmission. Findings from the current sample suggest that increasing the use of condoms and suppressive therapy might be the most efficient ways to address transmission, as use of both of these methods was low among the current sample, despite their proven benefits without necessitating disclosure prior to sexual activity.
# Tables and Figures

**Table 1: Demographic characteristics of the sample (N = 93)**

<table>
<thead>
<tr>
<th>Demographic Variable</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex (n = 93)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>19</td>
<td>20.4</td>
</tr>
<tr>
<td>Female</td>
<td>74</td>
<td>79.6</td>
</tr>
<tr>
<td><strong>Race/Ethnicity (n = 92)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>74</td>
<td>80.4</td>
</tr>
<tr>
<td>Black/African American</td>
<td>4</td>
<td>4.3</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>7</td>
<td>7.5</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>7.6</td>
</tr>
<tr>
<td><strong>Education (n = 93)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School / GED</td>
<td>2</td>
<td>2.2</td>
</tr>
<tr>
<td>Some college</td>
<td>10</td>
<td>10.8</td>
</tr>
<tr>
<td>2-year college degree</td>
<td>4</td>
<td>4.3</td>
</tr>
<tr>
<td>4-year college degree</td>
<td>20</td>
<td>21.5</td>
</tr>
<tr>
<td>Masters degree</td>
<td>35</td>
<td>37.6</td>
</tr>
<tr>
<td>Doctoral or Professional (JD, MD) degree</td>
<td>22</td>
<td>23.7</td>
</tr>
<tr>
<td><strong>Sexual Orientation (n = 92)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterosexual or straight</td>
<td>68</td>
<td>73.9</td>
</tr>
<tr>
<td>Bisexual</td>
<td>15</td>
<td>16.1</td>
</tr>
<tr>
<td>Homosexual, gay, or lesbian</td>
<td>4</td>
<td>4.3</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>5.4</td>
</tr>
<tr>
<td><strong>Country of Residence (n = 92)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>86</td>
<td>93.5</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>6.5</td>
</tr>
<tr>
<td><strong>Relationship Type at Last Sex (n = 86)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Booty call</td>
<td>5</td>
<td>5.8</td>
</tr>
<tr>
<td>Friends with benefits</td>
<td>6</td>
<td>7.0</td>
</tr>
<tr>
<td>Dating</td>
<td>6</td>
<td>7.0</td>
</tr>
<tr>
<td>Boyfriend/girlfriend</td>
<td>22</td>
<td>25.6</td>
</tr>
<tr>
<td>Fiancé</td>
<td>4</td>
<td>4.7</td>
</tr>
<tr>
<td>Husband/wife</td>
<td>37</td>
<td>43.0</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>6.5</td>
</tr>
<tr>
<td><strong>Relationship Length with Last Sex Partner (n= 81)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤ 3 months</td>
<td>10</td>
<td>12.3</td>
</tr>
<tr>
<td>4 to 6 months</td>
<td>5</td>
<td>6.2</td>
</tr>
<tr>
<td>7 months to less than 2 years</td>
<td>9</td>
<td>11.1</td>
</tr>
<tr>
<td>2 to 5 years</td>
<td>23</td>
<td>28.4</td>
</tr>
<tr>
<td>6+ years</td>
<td>32</td>
<td>39.5</td>
</tr>
<tr>
<td><strong>Age (n = 93)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range: 18 to 73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$M = 39.2$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$SD = 13.5$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2: Bivariate comparisons of individual and partner characteristics with disclosure at last sex

<table>
<thead>
<tr>
<th>Individual Level</th>
<th>Disclosed to Last Sex Partner</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>73</td>
<td>82.2%</td>
<td>17.8%</td>
</tr>
<tr>
<td>Other</td>
<td>18</td>
<td>72.2%</td>
<td>27.8%</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>74</td>
<td>79.7%</td>
<td>20.3%</td>
</tr>
<tr>
<td>Male</td>
<td>18</td>
<td>83.3%</td>
<td>16.7%</td>
</tr>
<tr>
<td><strong>Sexual Orientation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterosexual or straight</td>
<td>67</td>
<td>82.1%</td>
<td>17.9%</td>
</tr>
<tr>
<td>Other</td>
<td>24</td>
<td>75.0%</td>
<td>25.0%</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 year college degree or higher</td>
<td>81</td>
<td>80.2%</td>
<td>19.8%</td>
</tr>
<tr>
<td>Less than a 4 year degree</td>
<td>11</td>
<td>81.8%</td>
<td>18.2%</td>
</tr>
<tr>
<td><strong>First discovery</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concerning symptoms</td>
<td>85</td>
<td>80.0%</td>
<td>20.0%</td>
</tr>
<tr>
<td>Positive herpes blood test</td>
<td>6</td>
<td>83.3%</td>
<td>16.7%</td>
</tr>
<tr>
<td><strong>Diagnosis Type</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctor or nurse</td>
<td>80</td>
<td>81.2%</td>
<td>18.8%</td>
</tr>
<tr>
<td>Self-diagnosis only</td>
<td>10</td>
<td>70.0%</td>
<td>30.0%</td>
</tr>
<tr>
<td><strong>Medication use</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily suppressive</td>
<td>15</td>
<td>86.7%</td>
<td>13.3%</td>
</tr>
<tr>
<td>Other</td>
<td>67</td>
<td>80.6%</td>
<td>19.4%</td>
</tr>
<tr>
<td><strong>Outbreak Frequency</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than once a year</td>
<td>49</td>
<td>79.6%</td>
<td>20.4%</td>
</tr>
<tr>
<td>At least once a year</td>
<td>33</td>
<td>84.8%</td>
<td>15.2%</td>
</tr>
<tr>
<td><strong>Condom Use</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most times/Always</td>
<td>27</td>
<td>81.5%</td>
<td>18.5%</td>
</tr>
<tr>
<td>Sometimes/Rarely/Never</td>
<td>54</td>
<td>81.5%</td>
<td>18.5%</td>
</tr>
<tr>
<td><strong>Time Since Diagnosis (months)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>92</td>
<td>145.4 (126.8)</td>
<td>93.4 (84.2)</td>
</tr>
<tr>
<td><strong>Internalized Herpes Stigma</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>82</td>
<td>2.7 (0.9)</td>
<td>3.2 (0.8)</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>92</td>
<td>40.9 (13.3)</td>
<td>31.4 (11.7)</td>
</tr>
</tbody>
</table>
Table 2: Bivariate comparisons of individual and partner characteristics with disclosure at last sex (continued)

<table>
<thead>
<tr>
<th>Partner Level</th>
<th>Relationship Commitment</th>
<th>n=</th>
<th>Socially Committed</th>
<th>Not Socially Committed</th>
<th>Time in Relationship</th>
<th>n=</th>
<th>Socially Committed</th>
<th>Not Socially Committed</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Socially Committed</td>
<td>65</td>
<td>87.7%</td>
<td>12.3%</td>
<td>Less than 1 week to 3 months</td>
<td>12</td>
<td>50.0%</td>
<td>50.0%</td>
<td>.024</td>
</tr>
<tr>
<td></td>
<td>Not Socially Committed</td>
<td>20</td>
<td>55.0%</td>
<td>45.0%</td>
<td>4 months to 2 years</td>
<td>14</td>
<td>78.6%</td>
<td>21.4%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 years or longer</td>
<td>55</td>
<td>85.0%</td>
<td>14.5%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Partner Reaction Expectations</td>
<td>81</td>
<td>3.3 (1.2)</td>
<td>4.5 (0.6)</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Note. Row percents are provided for all categorical variables. Means and standard deviations are provided for continuous variables. a. Due to an expected cell count of less than 5 in at least one cell, a Fisher’s Exact test was performed. b. A Pearson’s chi-square statistic is reported. c. The Internalized Herpes Stigma scale is a mean score that ranges from 1 to 5, with higher scores indicating a higher internalized herpes stigma. d. Despite having a least one cell with an expected count of 5, a Pearson’s chi-square statistic was used. e. Partner Reaction Expectations is on a scale ranging from 1 = Very positively to 5 = Very negatively.
Table 3: Reasons for disclosure and non-disclosure with one’s last sexual partner

<table>
<thead>
<tr>
<th>Reasons for disclosure (n=68)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I wanted to be honest</td>
<td>92.6%</td>
</tr>
<tr>
<td>It is my partner’s right to know</td>
<td>89.7%</td>
</tr>
<tr>
<td>I cared about my partner</td>
<td>88.2%</td>
</tr>
<tr>
<td>I trusted my partner</td>
<td>82.4%</td>
</tr>
<tr>
<td>To protect my partner from getting herpes</td>
<td>80.9%</td>
</tr>
<tr>
<td>I expected my partner would be understanding</td>
<td>75.0%</td>
</tr>
<tr>
<td>I felt bad about keeping a secret</td>
<td>41.4%</td>
</tr>
<tr>
<td>Our relationship became more serious</td>
<td>39.7%</td>
</tr>
<tr>
<td>I thought my partner would find out anyway</td>
<td>38.2%</td>
</tr>
<tr>
<td>I felt guilty</td>
<td>29.4%</td>
</tr>
<tr>
<td>I needed the emotional support</td>
<td>23.5%</td>
</tr>
<tr>
<td>Because I had an outbreak</td>
<td>19.1%</td>
</tr>
<tr>
<td>I thought they gave it to me</td>
<td>16.2%</td>
</tr>
<tr>
<td>My partner wanted to stop using condoms</td>
<td>11.8%</td>
</tr>
<tr>
<td>Other</td>
<td>9.4%</td>
</tr>
<tr>
<td>I had been drinking alcohol</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reasons for non-disclosure (n=17)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I was concerned my partner would react badly</td>
<td>88.2%</td>
</tr>
<tr>
<td>I was concerned that my partner would have rejected me</td>
<td>88.2%</td>
</tr>
<tr>
<td>I was ashamed</td>
<td>82.4%</td>
</tr>
<tr>
<td>They didn’t ask</td>
<td>76.5%</td>
</tr>
<tr>
<td>It wasn’t a serious relationship</td>
<td>41.2%</td>
</tr>
<tr>
<td>I was concerned my that partner would end the relationship</td>
<td>35.3%</td>
</tr>
<tr>
<td>I was concerned that the information would spread to others</td>
<td>35.3%</td>
</tr>
<tr>
<td>Other</td>
<td>33.3%</td>
</tr>
<tr>
<td>I used condoms</td>
<td>29.4%</td>
</tr>
<tr>
<td>It was none of my partner's business</td>
<td>17.6%</td>
</tr>
<tr>
<td>I ended the relationship so that I didn’t have to tell them</td>
<td>17.6%</td>
</tr>
<tr>
<td>I was on daily herpes medication to prevent outbreaks</td>
<td>11.8%</td>
</tr>
<tr>
<td>We did not have vaginal or anal sex</td>
<td>11.8%</td>
</tr>
</tbody>
</table>

*Note.* Participants could select more than one option.
Figure 1. Disclosure timing among those who disclosed. Figure represents disclosure timing across a variety of sexual and relationship milestones among individuals who reported disclosing at some point to their last sexual partner. Numbers represent the number of respondents who indicated they disclosed before the activity occurred in the relationship, after the activity occurred in the relationship, if they are not sure whether or not they disclosed before or after this activity occurred, or whether this activity never occurred with the last person they had sex with.
Genital Herpes Disclosure: Outcomes, Rejection, and Future Intentions to Disclose

Abstract

Objectives: To examine partner reactions to genital herpes disclosure and how partner reactions influence future intentions to disclose. Methods: Participants 18+, who had a past disclosure experience to a potential sexual partner ($N = 86$), completed a web-based questionnaire about their experiences with genital herpes disclosure. Results: The majority of participants (>95%) felt that their partner responded either neutrally or positively after their last disclosure, and perceived rejection was low (<5%). Two out of three individuals who reported rejection did not report a negative partner reaction. Among participants who intended to have a future sexual partner, disclosure intentions were high, with 88% reporting they were likely or very likely to disclose in the future. Conclusions: When participants decided to tell partners about having genital herpes, their disclosure was generally well-received, despite pervasive fears that a partner would react negatively. Preliminary findings support current health promotion messages about genital herpes disclosure.

Introduction

Genital herpes is one of the most common sexually transmitted infections (STIs) in the U.S. (Centers for Disease Control and Prevention, 2010a). Both herpes simplex virus type 1 (HSV-1) and type 2 (HSV-2) can present in the genital region of the body (Centers for Disease Control and Prevention, 2010a). Data from the National Health and Nutrition Survey estimate the national prevalence of HSV-2 for 2005-2008 at 16.2% (Xu
et al., 2010). HSV-2 prevalence provides a conservative estimate of genital herpes prevalence, as HSV-1 is a growing contributor of genital herpes cases (C. M. Roberts et al., 2003; Xu et al., 2006). The Centers for Disease Control and Prevention (CDC) estimates that up to 50% of first-episode genital herpes cases are attributed to HSV-1 infection (Centers for Disease Control and Prevention, 2006).

Overall, genital herpes is a relatively benign condition from a medical standpoint (Green, 2004). Studies have consistently documented that the social aspects of the virus are considerably more burdensome than its physical manifestations (Green et al., 2003; Melville et al., 2003). Numerous negative psychosocial consequences have been associated with a genital herpes diagnosis including depression (Beauman, 2005), anxiety (Beauman, 2005; Oster & Cheek, 2008), feelings of unworthiness (Newton & McCabe, 2008b), decreased feelings of sexual attractiveness (Mindel, 1993; Newton & McCabe, 2008b), and fear (Lee & Craft, 2002; Mindel, 1993). The most frequent consequence of a herpes diagnosis is a reduction or complete withdrawal from sexual activity (American Social Health Association, 2000). Individuals indicate that living with the stigma associated with herpes is hardest part of having the disease (Lee & Craft, 2002; Melville et al., 2003; Mindel, 1993; Richards et al., 2008). Herpes symptoms can be treated, but herpes cannot be cured (Richards et al., 2008). As a result, the stigma remains with someone for life.

Disclosure of a genital herpes status to a potential partner is one strategy promoted to reduce genital herpes transmission (Wald et al., 2006). As genital herpes is an incurable STI, individuals with genital herpes face the decision to disclose their status to their partner with each new relationship formed. Such disclosure places individuals
with genital herpes in a position to face rejection. Existing studies suggest that fear of rejection is one of the most concerning aspects of having genital herpes (Green et al., 2003; Keller et al., 1991; Melville et al., 2003). Mark et al. (2009) found that 54.4% of women newly diagnosed with genital herpes reported fearing that others would reject them if they found out about their genital herpes diagnosis. VanderPlate and Aral (1997) indicated the source of genital herpes stress is disclosure, as this is the time when one must face the social realities of the disease and confront their own fears concerning it.

Though studies have consistently highlighted the fear of rejection as an important element in genital herpes disclosure, no research has systematically examined the results of disclosure to see if the fear of rejection has been realized. Most studies that include data about partner reactions to a disclosure do so within a broad discussion of disclosure and psychosocial adjustment in qualitative findings (Lee & Craft, 2002; Newton & McCabe, 2008b). Within the existing genital herpes disclosure research, questions about partner reactions and feelings of rejection are not consistently examined across study participants. To the best of our knowledge, only one study has systematically asked about disclosure outcomes specifically. Green and colleagues (2003) reported that 22 respondents reported “good reactions”, while five reported “adverse” outcomes to disclosure in their mixed methods investigation into genital herpes and determinants of disclosure. However, what constituted a “good” versus “adverse” outcome was not described, and perceptions of rejection were not measured.

The purpose of the present study was to examine perceptions of partner reactions to a disclosure, identify common reactions to a disclosure, understand which reactions are associated with feelings of rejection, and describe how such perceptions impact future
intentions to disclose among adults with genital herpes. Understanding disclosure outcomes has important implications for health messaging regarding stigma reduction and expectation management, especially in regards to reducing the psychosocial burden of genital herpes. Furthermore, exploring the relationship between past disclosure outcomes and future intentions to disclose might help explain some of the reasons inconsistent patterns of disclosure exist and why individuals are least likely to disclose to one’s most recent partner.

Methods

This study was approved by the University of South Florida Institutional Review Board.

Participants and Procedures

Data were collected via an anonymous, online questionnaire. A link to the online questionnaire was posted by study personnel on a various online venues, including Facebook, Twitter, and Reddit, and was distributed through professional and academic email lists between February 17th and May 1st, 2014. It additionally was distributed electronically by individuals who saw the link, resulting in a type of snowball distribution of the link through social media and email channels.

Participants were invited to take part in an online study about “Understanding Sexual Communication in Relationships”. Interested individuals ages 18 and older were asked to complete an online screener to determine study eligibility. Respondents who identified as 18 years or older and reported having genital herpes were permitted access to the full study questionnaire and qualified for an opportunity to be entered into a raffle for a $25.00 gift card for their time. Of the 1,622 individuals who completed the screener
questionnaire, 115 met initial inclusion criteria and then qualified for study participation. Of those who gained access to the full study questionnaire, 110 agreed to participate in a study that focused on the role of genital herpes in sexual communication. After data cleaning for duplicative respondents (n = 5), a preponderance of missing data (n = 10) and questionable or invalid response patterns (n = 2) (i.e., answering “3” regardless of question type or reporting they never had genital herpes after indicating they did), 86 individuals ages 18 and older with genital herpes who reported telling at least one potential romantic and/or sexual partner were included in the final analysis.

*Instrumentation*

The online questionnaire was developed through a rigorous pretesting process. First, items were developed from existing disclosure literature. Next, the questionnaire underwent a five phase, multi-method pretesting procedure to assess validity and reliability. The sequential pretesting phases included: expert review, cognitive interview with individuals with genital herpes, peer review, role playing, and a final set of cognitive interviews with the target population to assess changes made throughout the pretesting period.

The questionnaire was split into two phases: the initial screener and the core study questionnaire. The screener contained demographic questions. The second part of the questionnaire was herpes-specific, focusing on experiences with genital herpes and disclosure of genital herpes to sexual partners. Analyses focus on an individual’s last disclosure experience with someone in whom they were romantically or sexually interested.
Disclosure Reactions. The overall perception of a partner’s response was measured by the question, “Overall, how would you classify [your partner's] reaction when you told them you had genital herpes?” on a scale from 1 = Very positive to 5 = Very negative. Specific disclosure reactions were measured via 25 items which reflected both positive and negative reactions highlighted in qualitative literature. These items were measured on a 5 point scale from 1 = Strongly disagree to 5 = Strongly agree.

Rejection. Perception of rejection (yes/no) was measured by the item “Did your partner’s reaction to telling them about having herpes make you feel rejected?”.

Future Disclosure Intentions. Future intentions to disclose was measured by the item “How likely are you to tell your next sexual partner that you have genital herpes?” with response options including Very likely, Likely, Undecided, Unlikely, Very unlikely, and I do not intend on having another future sexual partner. Individuals who indicated they did not intend to have another future sexual partner were excluded from analyses examining future intentions to disclose.

Data Analysis

Data were exported from Qualtrics survey software (Qualtrics, 2013) to SPSS (version 22) statistical software (IBM Corp, 2013) for data analysis. Reactions to disclosure are presented using descriptive statistics, including frequencies and means. Associations between partner reactions and future intentions to disclose were examined using Spearman correlations. Associations between perceived rejection and future intentions to disclose were examined using chi-square analyses. All analyses were examined at the p < .05 level.
Results

Sample demographics are displayed in Table 1. Respondents were predominantly White (80%), female (79.1%), well-educated (83.7% with a 4 year degree or higher) and living in the United States (91.4%). Age ranged from 19 to 73 years ($M = 40, SD = 13.6$). Participants reported accessing the survey primarily through Facebook (50.6%) and email (41.2%), with 3.5% reporting Twitter and 4.7% reporting “Other website”.

The majority of participants who answered the question ($n = 69$) about a partner’s overall reaction reported that the last person with whom they were sexually or romantically interested responded “Neither positively nor negatively” (34.8%), “Somewhat positively” (29%), or “Very positively” (31.9%) to the disclosure. Only 3 respondents (4.3%) indicated the person to whom they disclosed reacted negatively or very negatively.

Similarly, 3 participants out of 68 (4.4%) indicated that their partner’s reaction made them feel rejected. However, only one of the respondents who reported feeling rejected assessed their partner’s overall response as “Somewhat negative” or “Very negative”. The two others assessed their partner’s reaction as “Somewhat positive” and “Neither positive nor negative”.

Participants expected their partners to react more negatively than they assessed their actual reactions. Though 42% of participants expected their partner to react “Somewhat negatively” prior to disclosing, 96% of the sample rated their partner’s reaction as “Neither positive nor negative” or better after disclosing (Figure 1). Expectations were significantly correlated with outcomes, ($r_{[69]} = .389, p < .001$).
indicating that respondents who expected a more negative reaction reported their partner responding more negatively.

Partner reactions are presented in Table 2. Among negative reactions, “needed time to think about where the relationship was headed” and “was more cautious around me” had the highest mean scores, $M = 2.06$ and $M = 1.95$ respectively, indicating more diversity among these two reactions. The majority of participants agreed or strongly agreed with the statement that their partner “appreciated the honesty” (77.3%) and “was understanding” (83.6%).

Sex with the last person the respondent disclosed to was common. Only 3 respondents reported not participating in any type of sex with the last person to whom they disclosed. The majority of participants reported having oral (90.1%) and vaginal (92.9%) sex with the last person to whom they disclosed.

Disclosure intentions were high. The majority of participants reported that they did not intend on having a future sex partner (48.7%) or were very likely (38.2%) to disclose to their next sexual partner. Among respondents who intended to have a future sexual partner, 3 reported they were “Very unlikely” to tell their next sexual partner, 1 was “Unlikely”, 2 were “Undecided”, 1 was “Likely”, and 29 were “Very likely” to inform their next sexual partner, meaning 80.5% of individuals who were open to the idea of having a future sex partner were “Very likely” to disclose in the future.

Due to low rates of negative partner reactions and low rates of reported rejection, statistical associations between last disclosure experience and future intentions to disclose were not feasible. All participants who reported a somewhat negative ($n = 2$) or very negative ($n = 1$) overall partner reaction to their last disclosure reported not intending on
having a future sexual partner. Beyond the overall impression of a partner’s reaction, there were no statistically significant correlations between individual types of reactions to a disclosure and future intentions to disclose, due to limited variability in intentions to disclose. Regarding rejection and future disclosure intentions, 2 out of 3 of the respondents who reported feeling rejected after their last disclosure also reported not intending on having a future sex partner; the last individual who reported feeling rejected reported she was “Very likely” to tell her next sexual partner.

**Discussion**

Fear of rejection is one of the most commonly reported fears and sources of anxiety for individuals with genital herpes (Bickford et al., 2007; Newton & McCabe, 2008b; Shepherd, 2010). However, rejection at last disclosure was not commonly reported among respondents in this sample. Only 4% of participants who responded to the rejection items reported feeling rejected by their partner after their last disclosure. Interestingly, respondents who felt rejected did not necessarily report that their partner reacted negatively, indicating that these two concepts are not the same. Two out of the 3 participants who reported feeling rejected after the last disclosure reported that their partner reacted “somewhat positively” or “neither positively nor negatively”. The 3 participants who reported a negative partner response indicated they did not intend to have a future sexual partner. The lack of negative reactions has important implications for health promotion messaging and decreasing psychosocial distress among this population, which are further described below.

This study found that expectations of a partner’s response did not match outcomes of a disclosure. Overall, disclosures were rated as unexpectedly positive. Despite
expecting a somewhat negative reaction prior to disclosure, the majority of respondents reported that their partner reacted either neutrally or better. Additionally, very few participants reported negative outcomes on the potential reactions index, with items regarding acting “more cautious” and “needed time to think about where the relationship was headed” having the most variability in answers among the potential negative reaction items. Even these items were not commonly endorsed, as 47% and 45% of respondents strongly disagreed with these statements, respectively. This supports research by Green and colleagues (2003), which found that the majority of participants reported “good” partner responses to a disclosure. Beyond overall reaction ratings, the two most commonly agreed with partner reactions in the present study were also positive. The majority of participants agreed with the statements regarding their partner being understanding and appreciating the honesty. Research conducted with individuals without genital herpes whose partners disclosed to them corroborates these findings, as Williams (2009) found that male partners rated themselves as being understanding to their female partner’s disclosure and as appreciating their honesty. Reported reactions were far more positive than negative.

There was little variability among the future intentions to disclose variable. The majority of participants who left a possibility of a future sex partner reported being likely or very likely to disclose to their next partner. Low levels of negative partner reactions may have influenced high intentions to disclose in the future. However, previous work found high intentions for disclosure among young women with genital herpes without exploring past partner reactions (Barnack, 2011). Together, these findings may indicate that intentions are high for disclosure regardless of past experiences, and characteristics
of future relationships are better predictors of disclosure with one’s next partner as opposed to prior reported intentions (Bickford et al., 2007; Green et al., 2003; Manuscript 1). It is also not clear if intentions to disclose translates into the actual disclosure behavior. Intentions to disclose were very high among this sample, with 85% of individuals reporting they were “Likely” or “Very likely” to disclose to their next sex partner. However, studies of genital herpes disclosure and non-disclosure indicate that actual disclosure rates at last sex are typically lower than disclosure intentions (Green, 2003; Manuscript 1).

This study is not devoid of limitations. First, individuals self-selected to be part of a study about understanding sexual communication in relationships. It is possible that individuals willing to complete a survey on sexual communication are more knowledgeable or more skilled at communicating about sexual topics. As many of the participants were recruited through professional organizations that address human sexuality, this could potentially be true. Findings may also be impacted by attrition; several respondents did not complete the questionnaire after they qualified for study inclusion, and these respondents could be characteristically different than those who completed the questionnaire. However, approximately 84% of the qualifying sample completed at least some of the subsequent genital herpes specific questions. The majority of the sample also reported being in a committed relationship of some type at their last disclosure. These findings may not apply as well to more casual types of relationships, even though a variety of relationship types were represented. Age may be another factor that could impact results; the mean age of the sample was 40 years old. As Myers and colleagues (Manuscript 1) have previously established that age is an important individual
level predictor of disclosure, with younger individuals disclosing less, findings may not
best represent experiences of adolescents and young adults who are commonly forming
new relationships. The low variability in future intentions to disclose may also be
impacted by social desirability bias, as health professionals have stressed the importance
of disclosure.

However, individuals with genital herpes represent a hard to reach, highly
stigmatized population without a robust sampling frame (Breitkopf, 2004). To address
this concern the research employed a study design that maximized reach while ensuring a
higher level of anonymity through the utilization of an anonymous electronic
questionnaire. Additionally, the present study hosted the link to the questionnaire on a
variety of online venues, including social networking sites such as Facebook, Twitter,
and Reddit, as well as distributing the survey through a variety of professional and
academic email lists to ensure a diverse sample of individuals with genital herpes and to
address potential sample limitations of recruiting through herpes-specific and STI-
specific websites and communities highlighted by Newton & McCabe (2008a). As such,
this study explores numerous concepts previously not addressed in the disclosure
literature using a unique methodology that does not over-sample from those heavily
burdened either physically (clinics) or psychosocially (support groups). It is also the
largest sample of participants of both genders and the largest predominantly U.S. sample
to date that examines genital herpes disclosure.

This is the first study to our knowledge to explore the role of rejection and
partner’s reaction in the disclosure process. Findings confirm anecdotal and clinical
experience highlighted on the American Sexual Health Association’s website about
disclosure (American Social Health Association, 2012). Despite the common fear of rejection in this priority population, most respondents reported a successful disclosure that led to a continuation of the sexual relationship with few negative reactions. Additionally, most reported that their partner’s reaction was more positive than expected, with the majority of people expecting a somewhat negative reaction by their partner prior to disclosing. Experiencing a more positive response than expected may have contributed to the high intentions to disclose in the future among those who intended to have a future sexual partner. The influence of a positive disclosure experience on future intentions to disclose is supported by findings that positive first disclosure experiences of stigmatized identities are associated with less fear of future disclosure (Chaudior & Quinn, 2010).

This study focused on the last disclosure experience, not necessarily one’s last sex partner. Several participants indicated that they did not disclose to their last sexual partner, but had in the past. This erratic pattern of disclosure could be attributed to one’s informal assessment of potential partner reactions. Qualitative literature suggests that individuals are less likely to tell someone they expect would react negatively (Green et al., 2003; Lee & Craft, 2002), and Green and colleagues (2003) found that individuals were statistically less likely to disclose to their most recent partner. The combination of these findings probably speaks to an informal evaluation of partner specific disclosure risks that someone with genital herpes conducts. Previous disclosure research suggests that individuals with sexually transmitted infections assess and balance potential disclosure risks through a variety of internal and external processes (Derlega, Winstead, Greene, Serovich, & Elwood, 2004; Green et al., 2003; Lee & Craft, 2002; Moneyham et
al., 1996). One strategy utilized to assess disclosure risk is to test a partner’s feelings about sexually transmitted infections broadly, or their infection specifically, before self-identifying as an individual included among that group (Green et al., 2003; Lee & Craft, 2002; Moneyham et al., 1996). However, little is known about the accuracy of this internal risk assessment. Findings from the current study indicate that disclosure reaction expectations are correlated with perceived reaction outcomes. Collectively, these findings may provide evidence to suggest that individuals are accurately assessing partner’s demeanor and not disclosing to partners they believe would react more negatively. As negative reactions were very low among this sample, partners reflected in the present study might be more amenable to this type of information than the pool of relationship possibilities and average response patterns.

Future health behavior research should assess the extent to which individuals are able to accurately assess potential partner negativity to a disclosure to better understand the decision to disclose and its implications for psychosocial health. Work by Zacharioudakis (2001) suggests that non-disclosure may be an important coping mechanism for individuals with high levels of psychosocial morbidity as a result of having genital herpes. Non-disclosers could be using the self-protecting coping strategy of non-disclosure strategically, potentially reducing the psychosocial impact of having their infection. However, individuals might be inaccurately assessing the potential negativity due to fear and stigma perceptions. Participants in the present study often expected worse outcomes than they received. Future studies should address the accuracy with which individuals make their disclosure/non-disclosure decision to assess potential avenues and strategies for intervention.
These findings have important health messaging implications for clinicians, therapists, and health educators, as common fears were not upheld, but rather debunked by the current study. This is the first study to our knowledge to explore these relationships, and our results provide additional credibility and potential ease of mind for individuals with genital herpes who fear a disclosure encounter. The disparity between expectations of a negative result and the relative positivity of most partners’ reactions might indicate that the majority of the psychosocial burden of genital herpes is self-inflicted through stigma internalization rather than actual social interactions. This truly speaks to the insidious nature of genital herpes stigma. Findings from the present study are applicable to stigma reduction efforts which utilize cognitively-based interventions, especially expectation management strategies, to reduce existing psychosocial morbidity and increase disclosure behavior. Individuals using expectation management to decrease the psychosocial morbidity of genital herpes can report that responses from partners are not likely to be negative despite fears. However, despite providing evidence to support genital herpes disclosure, it is important to note that findings from this exploratory study are not necessarily generalizable to other populations; negative responses to disclosure are also a possible outcome. As such, future research should replicate this study with additional, diverse populations of individuals with genital herpes prior to applying the findings broadly to health messages.
## Table 1: Sample demographics

<table>
<thead>
<tr>
<th>Demographic Variable</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex (n = 86)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>18</td>
<td>20.9</td>
</tr>
<tr>
<td>Female</td>
<td>68</td>
<td>79.1</td>
</tr>
<tr>
<td><strong>Race/Ethnicity (n = 85)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>68</td>
<td>80.0</td>
</tr>
<tr>
<td>Black/African American</td>
<td>3</td>
<td>3.5</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>7</td>
<td>8.2</td>
</tr>
<tr>
<td>Asian</td>
<td>4</td>
<td>4.7</td>
</tr>
<tr>
<td>Native American</td>
<td>1</td>
<td>1.2</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>2.4</td>
</tr>
<tr>
<td><strong>Education (n = 86)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School / GED</td>
<td>1</td>
<td>1.2</td>
</tr>
<tr>
<td>Some college</td>
<td>9</td>
<td>10.5</td>
</tr>
<tr>
<td>2-year college degree</td>
<td>4</td>
<td>4.7</td>
</tr>
<tr>
<td>4-year college degree</td>
<td>18</td>
<td>20.9</td>
</tr>
<tr>
<td>Masters degree</td>
<td>32</td>
<td>37.2</td>
</tr>
<tr>
<td>Doctoral degree</td>
<td>20</td>
<td>23.3</td>
</tr>
<tr>
<td>Professional degree (JD, MD)</td>
<td>2</td>
<td>2.3</td>
</tr>
<tr>
<td><strong>Sexual Orientation (n = 85)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterosexual or straight</td>
<td>65</td>
<td>76.5</td>
</tr>
<tr>
<td>Bisexual</td>
<td>13</td>
<td>15.3</td>
</tr>
<tr>
<td>Homosexual, gay, or lesbian</td>
<td>3</td>
<td>3.5</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>4.7</td>
</tr>
<tr>
<td><strong>Country of Residence (n = 85)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>80</td>
<td>91.4</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>8.6</td>
</tr>
<tr>
<td><strong>Relationship Type (n = 75)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Booty call</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Friends with benefits</td>
<td>6</td>
<td>8.0</td>
</tr>
<tr>
<td>Dating</td>
<td>8</td>
<td>10.7</td>
</tr>
<tr>
<td>Boyfriend/girlfriend</td>
<td>19</td>
<td>25.3</td>
</tr>
<tr>
<td>Fiancé</td>
<td>3</td>
<td>4.0</td>
</tr>
<tr>
<td>Husband/wife</td>
<td>32</td>
<td>42.7</td>
</tr>
<tr>
<td>An ex</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>6.7</td>
</tr>
</tbody>
</table>
Table 1: Sample demographics (continued)

<table>
<thead>
<tr>
<th>Relationship Length (n= 69)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 week</td>
<td>2</td>
<td>2.9</td>
</tr>
<tr>
<td>1 to 3 months</td>
<td>8</td>
<td>11.6</td>
</tr>
<tr>
<td>4 to 6 months</td>
<td>6</td>
<td>8.7</td>
</tr>
<tr>
<td>7 months to less than 2 years</td>
<td>7</td>
<td>10.1</td>
</tr>
<tr>
<td>2 to 5 years</td>
<td>20</td>
<td>29.0</td>
</tr>
<tr>
<td>6+ years</td>
<td>26</td>
<td>37.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time known prior to disclosing (n= 69)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 week</td>
<td>12</td>
<td>17.4</td>
</tr>
<tr>
<td>1 week to less than 1 month</td>
<td>10</td>
<td>14.5</td>
</tr>
<tr>
<td>1 to 3 months</td>
<td>13</td>
<td>18.8</td>
</tr>
<tr>
<td>4 to 6 months</td>
<td>8</td>
<td>11.6</td>
</tr>
<tr>
<td>7 months to less than 2 years</td>
<td>12</td>
<td>17.4</td>
</tr>
<tr>
<td>2 to 5 years</td>
<td>7</td>
<td>10.1</td>
</tr>
<tr>
<td>6+ years</td>
<td>7</td>
<td>10.1</td>
</tr>
</tbody>
</table>

Age (n = 86) \( M = 40.0 \) \( SD = 13.6 \)
Table 2: Partner reactions at last disclosure

<table>
<thead>
<tr>
<th>After telling [my partner] that I had herpes, it seemed like he/she:</th>
<th>n</th>
<th>NA</th>
<th>Strongly disagree (1)</th>
<th>Disagree (2)</th>
<th>Neither agree nor disagree (3)</th>
<th>Agree (4)</th>
<th>Strongly Agree (5)</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>needed time to think about where the relationship was headed.</td>
<td>64</td>
<td>5</td>
<td>45.3%</td>
<td>25.0%</td>
<td>14.1%</td>
<td>9.4%</td>
<td>6.3%</td>
<td>2.06 (1.25)</td>
</tr>
<tr>
<td>was more cautious around me.</td>
<td>67</td>
<td>3</td>
<td>47.0</td>
<td>25.8</td>
<td>13.6</td>
<td>12.1</td>
<td>1.5</td>
<td>1.95 (1.11)</td>
</tr>
<tr>
<td>became awkward in intimate scenarios.</td>
<td>66</td>
<td>3</td>
<td>53.0</td>
<td>28.8</td>
<td>12.1</td>
<td>1.5</td>
<td>4.5</td>
<td>1.76 (1.04)</td>
</tr>
<tr>
<td>was not as interested in having sex.</td>
<td>66</td>
<td>3</td>
<td>60.6</td>
<td>22.7</td>
<td>10.6</td>
<td>3.0</td>
<td>3.0</td>
<td>1.65 (1.00)</td>
</tr>
<tr>
<td>was disgusted.</td>
<td>66</td>
<td>3</td>
<td>56.1</td>
<td>31.8</td>
<td>6.1</td>
<td>3.0</td>
<td>3.0</td>
<td>1.65 (0.95)</td>
</tr>
<tr>
<td>did not touch me as much.</td>
<td>64</td>
<td>5</td>
<td>62.5</td>
<td>21.9</td>
<td>9.4</td>
<td>3.1</td>
<td>3.1</td>
<td>1.63 (1.00)</td>
</tr>
<tr>
<td>was not as passionate as they used to be.</td>
<td>63</td>
<td>5</td>
<td>63.5</td>
<td>23.8</td>
<td>3.2</td>
<td>6.3</td>
<td>3.2</td>
<td>1.62 (1.04)</td>
</tr>
<tr>
<td>found me less attractive.</td>
<td>66</td>
<td>3</td>
<td>59.1</td>
<td>27.3</td>
<td>10.6</td>
<td>0</td>
<td>2.3</td>
<td>1.61 (0.91)</td>
</tr>
<tr>
<td>kissed me less.</td>
<td>64</td>
<td>5</td>
<td>65.6</td>
<td>21.9</td>
<td>7.8</td>
<td>1.6</td>
<td>3.1</td>
<td>1.55 (0.94)</td>
</tr>
<tr>
<td>was angry.</td>
<td>66</td>
<td>3</td>
<td>63.6</td>
<td>25.8</td>
<td>6.1</td>
<td>1.5</td>
<td>3.0</td>
<td>1.55 (0.91)</td>
</tr>
<tr>
<td>contacted me less.</td>
<td>66</td>
<td>4</td>
<td>63.1</td>
<td>26.2</td>
<td>6.2</td>
<td>3.1</td>
<td>1.5</td>
<td>1.54 (0.87)</td>
</tr>
<tr>
<td>wished I had never told them.</td>
<td>65</td>
<td>3</td>
<td>64.6</td>
<td>26.2</td>
<td>6.2</td>
<td>0</td>
<td>3.1</td>
<td>1.51 (0.87)</td>
</tr>
<tr>
<td>wanted to break up.</td>
<td>60</td>
<td>9</td>
<td>68.3</td>
<td>20.0</td>
<td>6.7</td>
<td>3.3</td>
<td>1.7</td>
<td>1.50 (0.89)</td>
</tr>
</tbody>
</table>

| Non-negative Responses |
|---|---|---|---|---|---|---|---|---|
| was understanding. appreciated the honesty. | 67 | 1 | 3.0 | 1.5 | 11.9 | 43.3 | 40.3 | 4.16 (0.91) |
| did not change the way they acted. | 66 | 3 | 3.0 | 3.0 | 16.7 | 31.8 | 45.5 | 4.14 (1.01) |
| trusted me more. made a bigger commitment to the relationship. | 65 | 4 | 9.2 | 10.8 | 43.1 | 20.0 | 16.9 | 3.24 (1.15) |
| didn't care. | 67 | 2 | 23.9 | 19.4 | 23.9 | 22.4 | 10.4 | 2.76 (1.33) |

Note. Numbers reported as percentages. n NA means number reporting “Not Applicable”. Responses of “Not Applicable” were recoded as missing. Data was missing for this entire block of questions for 17 participants.
Figure 1. Expectations of a partner’s response to a disclosure compared to the assessment of their partner’s reaction at last disclosure (n = 69). Frequencies displayed.
Conclusion

This dissertation explored many components of genital herpes disclosure in two manuscripts. The first manuscript addressed individual and partner characteristics as predictors of a genital herpes disclosure to one’s last sex partner. It also examined reasons for disclosure and non-disclosure and disclosure timing. The second manuscript examined past partner reactions to a disclosure and impacts on future intentions to disclose.

Overall, partner characteristics are better predictors of a disclosure versus non-disclosure as opposed to individual level characteristics. Only age was a significant individual level predictor of disclosure, with non-disclosers reporting a significantly younger mean age than disclosers. However, relationship commitment, time in a relationship, and expectations of a partner’s reaction were all significant relationship characteristics at the bivariate level. Relationship commitment and expectations of a partner’s reaction remained significant in logistic regression models. Those in more socially committed, longer term relationships were more likely to have disclosed to their partner. This supports previous findings that individuals are more likely to disclose to serious as opposed to casual partners across the sexual disclosure literature (Chaudior, Fisher, & Simoni; Green et al., 2003; McKay & Mutchler, 2011; Scrivener et al., 2008).

Previous studies did not explore the statistical relationship between expectations and the decision to disclose. With every one point increase in expected partner
negativity, the odds of disclosure decreased by 80%. The distinction between expecting a negative response as opposed to a very negative response seems to have important ramifications on the decision to disclose and may trump other individual level factors that may facilitate a disclosure, such as respect for others and the desire to be honest. Non-disclosers expected their partner would react more negatively. Similarly, fear of a partner reacting badly and fear of rejection were two of the primary reasons selected for non-disclosure, which is consistent with other sexual disclosure literature (Derlega, Winstead, Greene, Serovich, & Elwood, 2004; Obermeyer, Baijal, & Pegurri, 2011; Scrivener et al., 2008). As a partner’s right to know and honesty were commonly reported reasons for disclosure, future research should seek to model these characteristics at the individual level to see if a high desire to be honest or respect for others can override relationship characteristics in the decision to disclose.

These findings have important implications for disclosure patterns, as many individuals choose to disclose to only some, but not all partners. Understanding which factors have the most influence on the decisions to disclose may allow for better targeted health information about the need to disclose. Many who did disclose did not disclose until after engaging in sexual activity with their partner. The CDC (2010a) and ASHA (2012) recommend disclosing prior to engaging in sexual behavior that could potentially transmit genital herpes, indicating a need for programming to address two separate populations 1) those who decide not to disclose at all and 2) those who disclose after engaging in activities that could potentially transmit the virus.

Because relationship dynamics play an important role in the decision to disclose and expectations of a partner’s response is a key factor in the decisions to disclose, it is
important to understand how accurately individuals can predict partner response. This dissertation found hints at mixed findings regarding this topic. Despite the majority of individuals expecting a partner to react somewhat negatively after a disclosure, the overwhelming majority of individuals reported a more positive reaction than expected. This indicates that individuals may not be able to accurately assess potential partner responses. On the other hand, those who did not decide to disclose were more likely to report that their partner would react VERY negatively than those who did disclose. Half of non-disclosers at last sex had successfully disclosed in the past. This may mean that their past partner gave signs and signals that indicated he or she would be more receptive to this type of disclosure. Findings from prior herpes and HIV disclosure literature find that individuals often test the waters to see how a romantic or sexual partner might respond prior to disclosure (Derlega et al., 2004; Green et al., 2003). This would support the idea that individuals with genital herpes are good at assessing who might react in a very negative way, including a rejection, and therefore protect themselves from this type of response by not disclosing. In order to better understand whether individuals with genital herpes are able to accurately assess the risk of disclosure, future research is needed. Furthermore, it is important to understand what would constitute a negative partner response and what a rejection would look like, as most people indicated a more positive reaction than expected. As over 95% of the sample who disclosed reported a neutral to very positive partner response and non-rejection, future research should better capture what types of responses would exemplify these negative outcomes, in order to assess whether or not they are real or exacerbated negative expectations and to help form health education messages about realistic partner reactions. It is important that inquiries
into this area ask about negative reactions and rejection separately, as these did not necessarily overlap, and rejection did not necessarily mean a relationship discontinuation.

**Theoretical Implications**

Though internalized genital herpes stigma was not a significant individual level predictor of disclosure as explored in Manuscript 1, implications for Stigma Theory are still apparent in the totality of the dissertation research, especially in Manuscript 2. First, the majority of individuals expected their partner to react somewhat negatively to their disclosure. This expectation of a negative response likely comes from the societal perceptions of the infection. However, what might be more important than one’s own perception of the stigma associated with genital herpes is their assessment of their partner’s beliefs about herpes stigma. Individuals who expected their partner to react very negatively were less likely to disclose to their last sexual partner. Additionally, the most common reasons reported for non-disclosure were shame, fear of rejection, and a partner reacting badly. Though not included in the manuscript results, 77.6% of participants (n = 76) indicated that they either agreed or strongly agreed with the statement: “Since being diagnosed with genital herpes, I have realized that genital herpes is not that bad in the grand scheme of things.” This supports past research that indicates that individuals cope with a diagnosis and come to terms with how the social stigma must now be incorporated with their own identity (Lee & Craft, 2002), and anxiety peaks at diagnosis and decreases over time (Miyai et al., 2004). As such, one’s personal beliefs about genital herpes may not be as indicative of how stigma plays a role in disclosure but rather how they perceive their partner feels about herpes might.
Additionally, this research has implications for HIV disclosure theoretical development. The Disclosure Processes Model, commonly discussed in HIV disclosure literature, is a framework used to understand when and why individuals with concealable stigmatizing identities disclose. Though not currently applied to genital herpes in the literature, this study begins to measure one of the key constructs of the model, the feedback loop, which has been largely missing from the sexual disclosure literature (Chaudior, Fisher, & Simoni, 2011). This study examines how past partner reactions are associated with future intentions to disclose. Although statistically testing this relationship was not feasible due to sample limitations in the present study (i.e., inadequate number of participants who intended to have a future sex partner), the structure of the questionnaire provides one opportunity to examine this theoretical feedback relationship in future studies of sexual disclosure.

**Strengths and Weaknesses**

One of the strengths of this study is that it quantified factors, such as fear of rejection, stigma, relationship seriousness, etc., highlighted in the qualitative literature to understand the relative importance of each of these factors. This allowed for direct comparisons of previously identified themes and provided additional understanding of which themes were most commonly ascribed to in relation to each other and across studies. This study also built on existing work by examining numerous individual and relationship characteristics previously unexplored in the qualitative and mixed methods research on genital herpes disclosure, such as outbreak frequency, suppressive medication use, and educational attainment.
Beyond simply generating items from themes in the literature, the questionnaire underwent a five phase pretesting process, including two phases which asked individuals with genital herpes to assess its sensitivity, validity, and comprehensiveness. This iterative pretesting phase assisted in finessing existing items and adding response options that cognitive interviewees suggested were relevant. Additionally, this multi-phase pretesting process highlighted potential areas of misunderstanding on key questions that impacted the survey flow and branching. This resulted in additional clarifying wording and likely increased the reliability and validity of respondents’ answers.

Another strength of this study was the recruitment technique. Individuals in the present study were recruited from a broader base of internet sources as opposed to STI clinics (which typically include higher proportions of individuals who are symptomatic and/or newly diagnosed) or support groups (either electronic or in person, groups who likely have a higher burden of psychosocial distress). Advertising the study as “Understanding Sexual Communication in Relationships” may have captured a different segment of individuals with genital herpes, specifically individuals who do not identify strongly with having the virus. It also moves past recruiting from STI specific and herpes specific websites, as these individuals may need more support, information, or identify more with the illness than individuals recruited through a more diversely used site, like Facebook. Recruiting more broadly as a study about sexual communication also helped to ensure sample validity, as the true purpose of the research was not identified until after the individual filled out the screener. As such, more diversity in the extent to which people identify with their herpes diagnosis might have been captured than in previous studies.
On the other hand, it is not clear if selection bias still impacted study findings. Of the 110 individuals who met inclusion criteria, 105 agreed to take part when the nature of the study focused on genital herpes, and 96 of those individuals went on to actually fill out the questionnaire. Therefore, perhaps individuals who had less negative experiences might have self-selected to continue participation. Additionally, the majority of the sample was recruited on Facebook through personal contacts of the PI (a female) and through academic and professional email listservs. As such, the sample was decidedly more White, female, and well educated than the population who has genital herpes at large. Furthermore, as the majority of the listservs were dedicated to sexuality research, these individuals might be characteristically different than the population at large regarding communication about sexuality related topics, specifically stigmatized, taboo topics like genital herpes disclosure. Because the study used the word “relationships” in the title, it might have also skewed the population towards individuals who are in committed relationships. However, this was the largest study conducted with a primarily U.S. population regarding genital herpes disclosure. As the online recruitment mechanism allows for greater geographical reach and is inexpensive, it facilitated generating a sizable sample compared to previous genital herpes studies, though it was still limited in size. Future research should attempt to recruit more individuals of color, individuals of lower educational attainment, and younger individuals who are still actively dating to gain additional perspective. Additionally, studies should prospectively follow newly diagnosed individuals to better understand disclosure patterns over time.
Summary

The dissertation research explored numerous themes throughout the genital herpes disclosure literature. First, it builds on existing qualitative and mixed methods disclosure research, allowing for direct comparison of dominant disclosure themes highlighted previously in the literature. This is the first study to examine the relative importance of reasons for disclosure and non-disclosure. Additionally, this is the first research to explore outcomes of rejection and partner reaction. Surprisingly, the overwhelming majority of individuals reported a relatively positive response from their partner at last disclosure, low levels of rejection, and high intentions to disclose in the future, despite pervasive fears about rejection both in this study and previous research. These findings may help others coming to terms with a decision to disclose, knowing the likelihood of a negative reaction was very low among this group.

This study begins to lay a research foundation for health education messages regarding genital herpes disclosure. Existing health education messages regarding partner reactions to a genital herpes disclosure are largely based on professional experience and anecdotal evidence due to a limited research base on which to craft their messages. Although findings from the present study corroborate existing health education messages about the positivity of a partner’s response made by ASHA, the leading educational and research organization in genital herpes psychosocial morbidity and disclosure, it is premature to suggest direct clinical or public health applications of the findings at the present time. If these preliminary findings are confirmed with further research among more diverse samples, it might be appropriate for clinicians, therapists, and health educators to inform people living with genital herpes that negative reactions to
genital herpes disclosure are uncommon. This information could assist people living with genital herpes in managing their expectations of partners’ responses. As such, with further research and replication, there is potential for practical applications of this study’s findings to both public health education messaging and clinical management of psychosocial morbidity associated with genital herpes.
List of References


Appendix A: Questionnaire

Online Questionnaire (exported survey from Qualtrics online survey software)

Dissertation 2-14-14 For Launch

Q1 Thank you for your interest in our research study Understanding Sexual Communication in Relationships (eIRB # 12595)! Participation is voluntary. There is information provided below to help you decide if you would like to participate.

About the study: We are interested in understanding how sexual communication can affect different types of relationships. More specifically, we are interested in how communication about sensitive topics has impacted you and your relationships.

You are being asked to take part in a one-time survey online.

There are no direct benefits from participating in the initial set of questions to see if you are an appropriate fit for the current study, but those who are an appropriate fit can be entered into a raffle to receive a $25 gift card.

The brief survey to see if you are eligible should only take 5 minutes to complete.

Results from this study may be published, but your name will not be associated with your answers.

Your rights as a participant: All of the information provided when taking part in this study will remain confidential. Your responses are also anonymous; the information you provide will not be linked to your name in any way. You may also stop the survey at any time or skip over questions you do not feel comfortable answering.

If you ever have any questions, feel free to contact the Principal Investigator Jaime Myers, MPH at jmyers@health.usf.edu or the University of South Florida's Institutional Review Board at (813) 974-5638.

Please click the Next button below if you are age 18 or older and you agree to take part in this survey.
Q2 Please answer the following questions to the best of your ability. The following questions will determine if you are an appropriate candidate for the current study.

Q3 Q) Where did you see the link to this study?

- Facebook (1)
- Twitter (2)
- Email (3)
- Reddit (5)
- Other website: Please explain below. (4) ________________

Q4 Q) What is your sex?

- Male (1)
- Female (2)
- Other (3)

Q5 Q) What is your age? __________

Q6 Q) What country do you live in?
Malawi (104)
Malaysia (105)
Maldives (106)
Mali (107)
Malta (108)
Marshall Islands (109)
Mauritania (110)
Mauritius (111)
Mexico (112)
Micronesia, Federated States of... (113)
Monaco (114)
Mongolia (115)
Montenegro (116)
Morocco (117)
Mozambique (118)
Myanmar (119)
Namibia (120)
Nauru (121)
Nepal (122)
Netherlands (123)
New Zealand (124)
Nicaragua (125)
Niger (126)
Nigeria (127)
North Korea (128)
Norway (129)
Oman (130)
Pakistan (131)
Palau (132)
Panama (133)
Papua New Guinea (134)
Paraguay (135)
Peru (136)
Philippines (137)
Poland (138)
Portugal (139)
Qatar (140)
Republic of Korea (141)
Republic of Moldova (142)
Romania (143)
Russian Federation (144)
Rwanda (145)
Saint Kitts and Nevis (146)
Saint Lucia (147)
Saint Vincent and the Grenadines (148)
Samoa (149)
San Marino (150)
Sao Tome and Principe (151)
Saudi Arabia (152)
Senegal (153)
Serbia (154)
Seychelles (155)
Sierra Leone (156)
Singapore (157)
Slovakia (158)
Slovenia (159)
Solomon Islands (160)
Somalia (161)
South Africa (162)
South Korea (163)
Spain (164)
Sri Lanka (165)
Sudan (166)
Suriname (167)
Swaziland (168)
Sweden (169)
Switzerland (170)
Syrian Arab Republic (171)
Tajikistan (172)
Thailand (173)
The former Yugoslav Republic of Macedonia (174)
Timor-Leste (175)
Togo (176)
Tonga (177)
Trinidad and Tobago (178)
Tunisia (179)
Turkey (180)
Turkmenistan (181)
Tuvalu (182)
Uganda (183)
Ukraine (184)
United Arab Emirates (185)
United Kingdom of Great Britain and Northern Ireland (186)
United Republic of Tanzania (187)
Uruguay (189)
Uzbekistan (190)
Vanuatu (191)
Venezuela, Bolivarian Republic of... (192)
Viet Nam (193)
Yemen (580)
Zambia (1357)
Zimbabwe (781)
Q7 Q) What is your race/ethnicity? You may check more than one option.

- White/Caucasian (1)
- Black/African American (2)
- Hispanic/Latino (3)
- Asian (4)
- Native American (5)
- Pacific Islander (6)
- Other (7) ____________________

Q8 Q) What is the highest level of education you have completed?

- Less than High School (1)
- High School / GED (2)
- Some College (3)
- 2-year College Degree (4)
- 4-year College Degree (5)
- Masters Degree (6)
- Doctoral Degree (7)
- Professional Degree (JD, MD) (8)

Q9 Q) What is your sexual orientation?

- Heterosexual or straight (1)
- Bisexual (2)
- Homosexual, gay, or lesbian (3)
- Other (4) ____________________
Q10 Q) Have you ever had any of the following?

<table>
<thead>
<tr>
<th></th>
<th>Yes (1)</th>
<th>No (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>chlamydia (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>gonorrhea (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>syphilis (4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>genital herpes (5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>human papillomavirus (HPV) (6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV infection or AIDS (9)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q32 According to the answers you provided above, you are a good fit for the current study. One of the many factors that can impact sex, communication, and relationships is sexually transmitted diseases. Genital herpes is one sexually transmitted disease that could influence communication in relationships. Because so little is known about this topic, we would like to know more about your experiences with genital herpes and how it has impacted your relationships. Would you be willing to answer some questions about these experiences with us?

Once again, your answers will NOT be associated with you; the survey is anonymous. Your honesty and openness would be greatly appreciated. We hope that the findings will be able to help individuals with genital herpes in the future.

If you agree to take part in the survey, you can choose to be entered into a raffle to win a $25 gift certificate. There will be 25 winners awarded. The survey takes approximately 20 minutes to complete.

Please indicate below if you would like to continue to participate in the study and click the Next button below.

☐ I agree to participate. (1)
☐ I do not wish to continue my participation. (2)
Q33 Q) Has a doctor or nurse ever told you that you had genital herpes?

☑ Yes (1)
☑ No (2)
☑ Unsure (3)

Q34 Q) How did you first realize that you had genital herpes?

☑ I had symptoms that I was concerned about. (1)
☑ I tested positive when I had a herpes blood test without ever experiencing symptoms first. (2)
☑ Other (3) ________________

Q35 Q) When did you find out that you had genital herpes? If you are unsure, please provide your best guess.

Month (drop down boxes)
Year (drop down boxes)

Q36 Q) Approximately how many sexual partners (both casual and/or serious) have you had since you were first told you had genital herpes? Please enter a number in each box below. If you are not sure, answer to the best of your ability.

Vaginal Sex Partners (22)
Oral Sex Partners (23)
Anal Sex Partners (24)
Q37 We understand that telling others about having genital herpes can be particularly challenging. There are many reasons why someone would or would share this information with others. The following questions ask about your decisions to tell or not to tell others about having genital herpes.

Q38 Q) Have you ever told someone that you were romantically or sexually interested in that you have genital herpes?

- Yes (1)
- No (2)

Q39 Q) Have you ever told anyone that you have genital herpes? This includes friends, family members, etc.

- Yes (1)
- No (2)

Answer If P33) Approximately how many sexual partners (both casual and/or serious) have you had since you were... Vaginal Sex Partners Is Greater Than 0 Or P33) Approximately how many sexual partners (both casual and/or serious) have you had since you were... Oral Sex Partners Is Greater Than 0 Or P33) Approximately how many sexual partners (both casual and/or serious) have you had since you were... Anal Sex Partners Is Greater Than 0

Q40 Q) Did you tell the last person you had sex with that you have genital herpes? This includes oral, anal, or vaginal sex. This could be at any point in your sexual relationship with this person - telling could have occurred before or after sex. This could also be someone you are currently seeing.

- Yes (1)
- No, but I will definitely tell them in the future. (2)
- No, but I might tell them in the future. (3)
- No, and I don't plan to tell them. (4)
sexual partners (both casual and/or serious) have you had since you were... Anal Sex Partners Is Greater Than 0

Q41 Q) Which types of sex have you had with the last person you had sex with?

<table>
<thead>
<tr>
<th></th>
<th>Yes (1)</th>
<th>No (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaginal Sex (1)</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Oral Sex (2)</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Anal Sex (3)</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Q42 Please think of the last time you told someone that you were romantically or sexually interested in about having genital herpes. Please put a name, nickname, or initials for this person in the box below to help you answer future questions.

EXAMPLE: beach boy

Whatever you write in the box will be used in future questions to help you answer them. We will not be using this information otherwise. The information you put below will show up underlined in future questions.

If you do not put anything in the box below, there will be blanks in future questions.

Q43 All of the questions on this page all refer to ${q://QID80/ChoiceTextEntryValue}.

You identified this person as the last person you were sexually or romantically interested in who you told about having genital herpes in the previous box.
Q44 Q) Which types of sex have you had with ${q://QID80/ChoiceTextEntryValue}?

<table>
<thead>
<tr>
<th></th>
<th>Yes (1)</th>
<th>No (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaginal Sex</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Oral Sex</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Anal Sex</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Q45 Q) How would you best describe your relationship with ${q://QID80/ChoiceTextEntryValue} at the time you told them?

- one night stand (1)
- booty call (2)
- friends with benefits (3)
- dating (4)
- boyfriend/girlfriend (5)
- fiancé (6)
- husband/wife (7)
- an ex (8)
- other (9) ____________________
Q46 Q) Why did you decide to tell \(q://QID80/ChoiceTextEntryValue\) about having genital herpes?

Below are some reasons that people decide to tell others about having genital herpes. Please select “YES- Applies to Me” if the statement describes a reason that you decided to tell \(q://QID80/ChoiceTextEntryValue\) about having genital herpes or “NO- Does NOT apply” if it is not a reason you decided to tell.

<table>
<thead>
<tr>
<th>Reason</th>
<th>YES Applies to Me (1)</th>
<th>NO Does NOT apply (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I thought they gave it to me. (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I wanted to be honest. (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I needed emotional support. (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I expected my partner would be understanding. (4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I thought my partner would find out anyway. (5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I trusted my partner. (6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt guilty. (7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To protect my partner from getting herpes. (8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Because I had an outbreak. (9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I cared about my partner. (10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is my partner’s right to know. (11)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I had been drinking alcohol. (12)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our relationship became more serious. (13)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My partner wanted to stop using condoms. (14)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt bad about keeping a secret. (15)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Q47 Below are the reasons you selected in the previous question as reasons you told $\{q://QID80/ChoiceTextEntryValue\}$ about having genital herpes.

Q) Which of the following was the PRIMARY reason that you decided to tell $\{q://QID80/ChoiceTextEntryValue\}$ about having genital herpes?

Q48 Q) Approximately how long had you known $\{q://QID80/ChoiceTextEntryValue\}$ before you told them about having genital herpes? Please select the best option from the answers provided below. If you are unsure, please provide your best guess.

- Less than 1 week (1)
- 1 week to less than 1 month (2)
- 1 to 3 months (3)
- 4 to 6 months (4)
- 7 months to less than 2 years (5)
- 2 to 5 years (6)
- 6+ years (7)

Q49 Q) Approximately how long did or has your sexual or romantic relationship with $\{q://QID80/ChoiceTextEntryValue\}$ last(ed)? Please select the best option from the answers provided below. If you are unsure, please provide your best guess.

- Less than 1 week (1)
- 1 week to less than 1 month (2)
- 1 to 3 months (3)
- 4 to 6 months (4)
- 7 months to less than 2 years (5)
- 2 to 5 years (6)
- 6+ years (7)
Q50 Please fill in the box to answer each question with yes, no, not sure, or this activity never occurred with this person based on when you told \${q://QID80/ChoiceTextEntryValue} about having genital herpes.

Example: If you told your partner about having genital herpes BEFORE your first kiss, you would select YES. These items are not in a specific order and can occur, but are not expected to occur, in every type of relationship.

Q) I told \${q://QID80/ChoiceTextEntryValue} about having genital herpes . . .

<table>
<thead>
<tr>
<th>Event Description</th>
<th>Yes (1)</th>
<th>No (2)</th>
<th>Not Sure (3)</th>
<th>This activity never occurred with this person. (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>before the first kiss (1)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>before my partner touched my genitals with his or her hands (fingering/hand job) (8)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>before I touched my partner's genitals with my hands (fingering/hand job) (9)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>before my partner gave me oral sex (10)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>before I gave my partner oral sex (11)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>before we had vaginal sex (12)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>before we had anal sex (13)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>before the first date (2)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>before we both stopped seeing other people (became exclusive) (3)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>before I said, &quot;I love you&quot; (4)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>before they said, &quot;I love you&quot;&quot; (5)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
before we got engaged (6)  ○  ○  ○  ○
before we got married (7)  ○  ○  ○  ○

Q51 Q) Overall, how would you classify ${q://QID80/ChoiceTextEntryValue}$’s reaction when you told them you had genital herpes?

○ Very positive (1)
○ Somewhat positive (2)
○ Neither positive nor negative (3)
○ Somewhat negative (4)
○ Very negative (5)

Q52 Q) BEFORE you told ${q://QID80/ChoiceTextEntryValue}$ about having genital herpes, how did you EXPECT ${q://QID80/ChoiceTextEntryValue}$ to react?

○ Very positively (1)
○ Somewhat positively (2)
○ Neither positively or negatively (3)
○ Somewhat negatively (4)
○ Very negatively (5)

Q53 Q) Did ${q://QID80/ChoiceTextEntryValue}$’s reaction to telling them about having herpes make you feel rejected?

○ Yes (1)
○ No (2)
Q54 Q) After telling $q://QID80/ChoiceTextEntryValue$ that I had herpes, it seemed like $q://QID80/ChoiceTextEntryValue$:

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree (1)</th>
<th>Disagree (2)</th>
<th>Neither Agree nor Disagree (3)</th>
<th>Agree (4)</th>
<th>Strongly Agree (5)</th>
<th>Not Applicable (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>did not touch me as much. (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>was not as interested in having sex. (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>trusted me more. (3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>wanted to break up. (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>kissed me less. (5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>was not as passionate as they used to be. (6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>appreciated the honesty. (7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>needed time to think about where the relationship was headed. (8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>was disgusted. (9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>didn’t care. (10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>was more cautious around me. (11)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>was angry. (12)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>did not change the way they acted. (13)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>contacted me less. (14)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>found me less attractive. (15)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
made a bigger commitment to the relationship. (16)
became awkward in intimate scenarios. (17)
wished I had never told them. (18)
was understanding. (19)

Q55 Q) How would you best describe your relationship with the last person you had sex with at the time you last had sex?

- one night stand (1)
- booty call (2)
- friends with benefits (3)
- dating (4)
- boyfriend/girlfriend (5)
- fiance (6)
- husband/wife (7)
- an ex (8)
- other (9) ____________________
Q56 Q) Why did you decide to tell the last person you had sex with about having genital herpes?

Below are some reasons that people decide to tell others about having genital herpes. Please select “YES- Applies to Me” if the statement describes a reason that you decided to tell the last person you had sex with about your genital herpes or “NO- Does NOT apply” if it is not a reason you decided to tell.

<table>
<thead>
<tr>
<th>Reason</th>
<th>YES Applies to Me (1)</th>
<th>NO Does NOT apply (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I thought they gave it to me. (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I wanted to be honest. (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I needed emotional support. (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I expected my partner would be understanding. (4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I thought my partner would find out anyway. (5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I trusted my partner. (6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt guilty. (7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To protect my partner from getting herpes. (8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Because I had an outbreak. (9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I cared about my partner. (10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is my partner’s right to know. (11)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I had been drinking alcohol. (12)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our relationship became more serious. (13)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My partner wanted to stop using condoms. (14)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt bad about keeping a secret. (15)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Q57 Below are reasons you selected in the previous question as reasons you decided to tell the last person you had sex with about having genital herpes. Q) Which of the following is the PRIMARY reason you decided to tell the last person you had sex with that you have genital herpes?

Q58 Q) Approximately how long had you known the last person you had sex with before you told them about having genital herpes? Please select the best option from the answers provided below. If you are unsure, please provide your best guess.

- Less than 1 week (1)
- 1 week to less than 1 month (2)
- 1 to 3 months (3)
- 4 to 6 months (4)
- 7 months to less than 2 years (5)
- 2 to 5 years (6)
- 6+ years (7)

Q59 Q) Approximately how long did or has your sexual or romantic relationship with the last person you had sex with lasted? Please select the best option from the answers provided below. If you are unsure, please provide your best guess.

- Less than 1 week (1)
- 1 week to less than 1 month (2)
- 1 to 3 months (3)
- 4 to 6 months (4)
- 7 months to less than 2 years (5)
- 2 to 5 years (6)
- 6+ years (7)
Q60 Please fill in the box to answer each question with yes, no, or not applicable based on when you told the last person you had sex with about having genital herpes.

Example: If you told your partner about having genital herpes BEFORE your first kiss, you would select YES. These items are not in a specific order and can occur, but are not expected to occur, in every type of relationship.

Q) I told the last person I had sex with about having genital herpes . . .

<table>
<thead>
<tr>
<th>Activity</th>
<th>Yes (1)</th>
<th>No (2)</th>
<th>Not Sure (3)</th>
<th>This activity never occurred with this person. (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>before the first kiss (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>before my partner touched my genitals with his or her hands (fingering/hand job) (8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>before I touched my partner's genitals with my hands (fingering/hand job) (9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>before my partner gave me oral sex (10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>before I gave my partner oral sex (11)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>before we had vaginal sex (12)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>before we had anal sex (13)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>before the first date (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>before we both stopped seeing other people (became exclusive) (3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>before I said, &quot;I love you&quot; (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>before they said, &quot;I love you&quot; (5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>before we got engaged (6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Q61 Q) Overall, how would you classify the last person you had sex with’s reaction when you told them you had genital herpes?

- Very positive (1)
- Somewhat positive (2)
- Neither positive nor negative (3)
- Somewhat negative (4)
- Very negative (5)

Q62 Q) BEFORE you told the last person you had sex with about having genital herpes, how did you EXPECT your partner to react to telling them?

- Very positively (1)
- Somewhat positively (2)
- Neither positively or negatively (3)
- Somewhat negatively (4)
- Very negatively (5)

Q63 Q) Did their reaction to telling them about having herpes make you feel rejected?

- Yes (1)
- No (2)
Q64 Q) After telling the last person I had sex with that I had herpes, it seemed like he/she:

<table>
<thead>
<tr>
<th>Response</th>
<th>Strongly Disagree (1)</th>
<th>Disagree (2)</th>
<th>Neither Agree nor Disagree (3)</th>
<th>Agree (4)</th>
<th>Strongly Agree (5)</th>
<th>Not Applicable (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>did not touch me as much. (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>was not as interested in having sex. (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>trusted me more. (3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>wanted to break up. (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>kissed me less. (5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>was not as passionate as they used to be. (6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>appreciated the honesty. (7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>needed time to think about where the relationship was headed. (8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>was disgusted. (9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>didn’t care. (10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>was more cautious around me. (11)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>was angry. (12)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>did not change the way they acted. (13)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>contacted me less. (14)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>found me less attractive. (15)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
made a bigger commitment to the relationship. (16)
became awkward in intimate scenarios. (17)
wished I had never told them. (18)
was understanding. (19)

Q65 Q) Are you still having a romantic or sexual relationship with this person?

☑ Yes (1)
☐ No (2)

Q66 Q) Is this the last person who you were sexually or romantically interested in that you told about your genital herpes?

☑ Yes (1)
☐ No (2)

Q67 Q) In your opinion, how do you EXPECT the last person you had sex with would have reacted if you had told them about having genital herpes?

☑ Very positively (1)
☐ Somewhat positively (2)
☐ Neither positively or negatively (3)
☐ Somewhat negatively (4)
☐ Very negatively (5)
Q68 Q) Why did you decide not to tell the last person you had sex with about having genital herpes?

Below are some reasons that people decide not to tell others about having genital herpes. Please select “YES- Applies to Me” if the statement describes a reason that you decided not to tell or “NO- Does NOT apply” if it is not applicable to your situation.

<table>
<thead>
<tr>
<th>Reason</th>
<th>YES Applies to Me (1)</th>
<th>NO Does NOT apply (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I was concerned my partner would react badly.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I was concerned that my partner would end the relationship.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It wasn't a serious relationship.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I was on daily herpes medication to prevent outbreaks.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I was ashamed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It was none of my partner's business.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I was concerned that my partner would have rejected me.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I ended the relationship so that I didn't have to tell them.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I used condoms.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I was concerned that the information would spread to others.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>We did not have vaginal or anal sex.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>They didn't ask.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Q69 Below are reasons you selected in the previous question as reasons you decided not to tell the last person you had sex with about having genital herpes. Q) Which of the following is the PRIMARY reason you decided not to tell the last person you had sex with that you have genital herpes?

Q70 Q) How would you best describe your relationship with the last person you had sex with at the time you last had sex?

- one night stand (1)
- booty call (2)
- friends with benefits (3)
- dating (4)
- boyfriend/girlfriend (5)
- fiance (6)
- husband/wife (7)
- an ex (8)
- other (9) ____________________

Q71 Q) Approximately how long did or has your sexual or romantic relationship last(ed) with this person? Please choose the best option from the answers provided below. If you are not sure, please provide your best guess.

- Less than 1 week (1)
- 1 week to less than 1 month (2)
- 1 to 3 months (3)
- 4 to 6 months (4)
- 7 months to less than 2 years (5)
- 2 to 5 years (6)
- 6+ years (7)
Q72 This section of questions refers to activities that could or could not have occurred with the last person you had sex with.

Q) Please select "Yes" for any item that did happen with the last person you had sex with or "No" for things that did not happen at any time in that relationship. These items are not in a specific order and can occur, but are not expected to occur, in every type of relationship.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Yes (1)</th>
<th>No (2)</th>
<th>Not Sure (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>We kissed. (1)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>They touched my genitals with their hands (fingering/hand job). (8)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I touched their genitals with my hands (fingering/hand job). (9)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I gave them oral sex. (10)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>They gave me oral sex. (11)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>We had vaginal sex. (12)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>We had anal sex. (13)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>We had a first date. (2)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>We stopped seeing other people (became exclusive). (3)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I said, &quot;I love you&quot;. (4)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>They said, &quot;I love you&quot;. (5)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>We got engaged. (6)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>We got married. (7)</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Q73 Q) Are you still having a romantic or sexual relationship with this person?

☐ Yes (1)
☐ No (2)

Q74 You are almost finished with the survey. The following questions ask about your current experience with genital herpes.

Q75 Q) Approximately how often do you have genital herpes outbreaks?

☐ I have never had an outbreak or genital herpes symptoms. (1)
☐ I haven't had an outbreak since my very first time getting genital herpes. (2)
☐ Less than once a year. (3)
☐ 1 to 2 times a year (4)
☐ 3 to 5 times a year (5)
☐ 6 or more times a year (6)

Q76 Q) Do you take any medication for genital herpes?

☐ Yes, daily suppressive treatment to prevent outbreaks. (1)
☐ Yes, when I notice signs of an outbreak or during an outbreak to shorten its length. (2)
☐ No (3)
☐ Other (4) ________________

Answer If P33) Approximately how many sexual partners (both casual ... Vaginal Sex Partners Is Greater Than or Equal to 1 Or P33) Approximately how many sexual partners (both casual ... Anal Sex Partners Is Greater Than or Equal to 1

Q77 Q) Since discovering you had genital herpes, how often have you used condoms when having anal or vaginal sex?

☐ Never (1)
☐ Rarely (2)
☐ Sometimes (3)
☐ Most of the time (4)
☐ Always (5)
Q78 Q) Please indicate your current level of agreement with the following statements.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree (1)</th>
<th>Disagree (2)</th>
<th>Neither Agree nor Disagree (3)</th>
<th>Agree (4)</th>
<th>Strongly Agree (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have been hurt by how people reacted to learning I have herpes. (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have stopped socializing with some people because of their reactions to my having herpes. (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have lost friends by telling them I have herpes. (3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am very careful who I tell that I have herpes. (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I worry that people who know I have herpes will tell others. (5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel that I am not as good a person as others because I have herpes. (6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having herpes makes me feel unclean. (7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having herpes makes me feel that I’m a bad person. (8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most people think that a person with herpes is disgusting. (9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most people with herpes are rejected when others find out. (10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel that I am not as sexually desirable as others because I have herpes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Having herpes makes me feel dirty in sexual situations. (12)

Q79 Q) Since being diagnosed with genital herpes, I have . . .

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree (1)</th>
<th>Disagree (2)</th>
<th>Neither Agree nor Disagree (3)</th>
<th>Agree (4)</th>
<th>Strongly Agree (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learned more about my health. (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learned how to control my genital herpes. (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formed closer relationships with people who care about me. (3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Become a stronger person. (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Realized that I have a lot of people who I can trust. (5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Realized that genital herpes is not that bad in the grand scheme of things. (6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Q80 Q) How likely are you to tell your next sexual partner that you have genital herpes?

- Very Unlikely (1)
- Unlikely (2)
- Likely (4)
- Very Likely (5)
- Undecided (3)
- I do not intend on having another future sexual partner. (6)
Q81 Q) Overall, how honest were you in answering these questions?

☐ Not honest at all (1)
☐ Not very honest (2)
☐ Fairly honest (3)
☐ Very honest (4)
☐ Completely honest (5)

Q82 Is there anything else you would like to share about this experience?

Q83 Thank you for taking the time to complete this survey! I greatly appreciate your help.

When you click the "Next" button below, your survey will be submitted and you will be automatically linked to a separate page so that you can either enter to win the $25 gift card or provide contact information if you would like to learn more about the study or participate in future studies. We have you link to a separate survey so that your name and any other information you provide is not linked to the answers you provided above.

Thank you again!

Sincerely,

Jaime Myers, MPH

jmyers@health.usf.edu
Appendix B: Institutional Review Board Approval

4/24/2013

Jaime Myers, M.P.H.
Community and Family Health
13201 Bruce B. Downs Blvd., MDC 56
Tampa, FL 33612

RE: Expedited Approval for Initial Review
IRB#: Pro00012595
Title: Understanding Sexual Communication in Relationships

Study Approval Period: 4/24/2013 to 4/24/2014

Dear Ms. Myers:

On 4/24/2013, the Institutional Review Board (IRB) reviewed and APPROVED the above application and all documents outlined below.

Approved Item(s):
Protocol Document(s):
Proposal v1

Consent Script(s):
Survey Consent Scripts v1 4-19-13

It was the determination of the IRB that your study qualified for expedited review which includes activities that (1) present no more than minimal risk to human subjects, and (2) involve only procedures listed in one or more of the categories outlined below. The IRB may review research through the expedited review procedure authorized by 45CFR46.110 and 21 CFR 56.110. The research proposed in this study is categorized under the following expedited review category:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.
Your study qualifies for a waiver of the requirements for the documentation of informed consent as outlined in the federal regulations at 45CFR46.117(c) which states that an IRB may waive the requirement for the investigator to obtain a signed consent form for some or all subjects.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB. Any changes to the approved research must be submitted to the IRB for review and approval by an amendment.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

Kristen Salomon, Ph.D., Vice Chairperson
USF Institutional Review Board