

THE INFLUENCE OF STI STATUS ON ROMANTIC AND SEXUAL BEHAVIOR
INTENTIONS

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION OF THE UNIVERSITY
OF HAWAI'I AT MĀNOA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF

DOCTOR OF PHILOSOPHY

IN
PSYCHOLOGY

December 2015

By
Paul D. Thornton

Dissertation Committee:

Elaine Hatfield, Chairperson
Kristin Pauker
Scott Sinnett
Yi-yuan Xu
Richard Rapson

Keywords: genital herpes, enacted stigma, HSV-2, oral herpes, social stigma, stigma theory

Dedication

*This dissertation is dedicated to my beloved mother, Carol “Joanne” Susskind (1942-2015).
Thank you for always believing in me.*

Acknowledgements

I would like to thank my dissertation committee for their expert guidance and support: Dr. Elaine Hatfield, Dr. Kristin Pauker, Dr. Richard Rapson, Dr. Scott Sinnett, and Dr. Yi-yuan Xu.

Abstract

It is estimated that approximately 90% of the world population has contracted oral herpes, genital herpes, or both (Wald & Corey, 2007). Although the prevalence of herpes may seem alarming, it rarely causes any serious health problems (Fanfair et al., 2013). Despite the ubiquity and typically harmless nature of herpes, the genital variety in particular is highly socially stigmatized, evoking significant psychosocial distress in those who acquire it (Kimberlin & Rouse, 2004). While research has tended to focus on internalized and anticipated stigma experienced by those who have contracted genital herpes, as well as ways of decreasing transmission of the virus, enacted stigma has largely been ignored. The present study examined the influence of herpes status on romantic and sexual behavior intentions by randomly assigning participants to see targets that were said to either have oral herpes, genital herpes, or no herpes. Differences between social stigma associated with oral and genital herpes were also compared. Results indicate that respondents are significantly less willing to pursue romantic relationships or have sex with targets who are described as having oral or genital herpes compared with targets not described as having herpes of either type. Results further indicate that, while stigma associated with genital herpes is greater than stigma associated with oral herpes, both herpes types appear to be highly stigmatized. Findings and suggestions for future research are discussed.

Table of Contents

Dedication.....	ii
Acknowledgements.....	iii
Abstract.....	iv
List of Tables.....	iiiv
List of Figures.....	ix
Chapter 1 – Introduction.....	1-6
Background.....	1-3
Purpose.....	4
Need and Rationale.....	5
Hypotheses.....	6
Chapter 2 - Literature Review.....	7-16
Herpes Viruses.....	7-9
The Social Stigma of Genital Herpes.....	10-16
Chapter 3 - Research Methods.....	17 -25
Design.....	17
Participants.....	17-19
Measures.....	19-21
Stimuli.....	21-22
Procedures.....	23-24

Statistical Analyses.....	24-25
Chapter 4 - Results.....	26-29
Hypothesis 1.....	26-27
Hypothesis 2.....	27-28
Hypothesis 3.....	28-29
Chapter 5 – Discussion.....	30-38
Answers to Research Questions.....	30-32
General Discussion.....	32-36
Study Limitations.....	36-37
Suggestions for Future Research.....	37-38
Conclusions.....	38
Appendices.....	57-78
Appendix A. MTurk Account Page.....	57
Appendix B. Demographic Survey.....	58-60
Appendix C. Romantic/Sexual Behavior Survey (RSBS).....	61-63
Appendix D. Herpes Attitudes Scale (HAS): “Genital Herpes”.....	64-65
Appendix E. Herpes Attitudes Scale (HAS): “Oral Herpes”.....	66-67
Appendix F. Female “Oral Herpes” Vignette.....	68
Appendix G. Female Genital Herpes” Vignette.....	69
Appendix H. Female “No Herpes” Vignette.....	70
Appendix I. Male “Oral Herpes” Vignette.....	71

Appendix J. Male “Genital Herpes” Vignette.....72

Appendix K. Male “No Herpes” Vignette.....73

Appendix L. Examples of MTurk Advertisements.....74

Appendix M. MTurk Survey Link/Consent Form.....75

Appendix N. Survey Instructions.....76

Appendix O. Debriefing/Consent Form.....77-78

References.....39-49

List of Tables

Table 1. Comparison of Target PA Ratings: Pilot Study and Current Study.....	50
Table 2. Romantic Behavior Intentions According to Herpes Status.....	51
Table 3. Sexual Behavior Intentions According to Herpes Status.....	52

List of Figures

Figure 1. Attractive Female Target.....	53
Figure 2. Average Female Target.....	54
Figure 3. Attractive Male Target.....	55
Figure 4. Average Male Target.....	56

Chapter 1 - Introduction

Upon hearing the word “herpes,” our initial reaction will largely depend upon our knowledge of herpes viruses, as well as whether herpes is a virus that we have already acquired (and are aware of the fact that we have acquired it), a virus that we have already acquired (and are oblivious to the fact that we have acquired it), or a virus that we have not yet acquired. Whatever an individual’s knowledge about, personal experience with, or attitudes about herpes, the prevalence of herpes viruses is clearly notable. It is estimated that approximately 90% of the world population is infected with oral herpes (i.e., “cold sores”), genital herpes, or both (Wald & Corey, 2007), and this does not take into account some of the other extremely prevalent herpes viruses that are responsible for such common conditions as chicken pox, shingles, and “mono” (Chayavichitsilp, Buckwalter, Krakowski, & Friedlander, 2009).

Prevalence in the U.S. is similar to global estimates. It is estimated that 90% of people in the U.S. acquire HSV-1 by middle age (Wald, 2006). This is the strain of herpes responsible for almost all cases of oral herpes and an increasing number of genital herpes cases (Xu et al., 2006). Approximately 16% of people in the U.S. between 14-49 years of age have contracted HSV-2, the strain responsible for most cases of genital herpes (Centers for Disease Control and Prevention [CDC], 2010).

Although the epidemiology of herpes appears to be quite alarming, in its typical manifestation, herpes of any type rarely ever results in any serious health outcomes (Fanfair et al., 2013). In fact, most people who contract oral or genital herpes exhibit no physical symptoms or symptoms so mild that they go completely undetected (CDC, 2010; Schillinger et al., 2008).

And for those who do experience symptoms, antiviral medication is usually highly effective in managing symptoms (Patel, 1997).

Despite the extreme prevalence and typically innocuous nature of herpes viruses, the stigma associated with the genital variety in particular is quite salient in American culture. In a 2007 Harris-Interactive poll, genital herpes was ranked the most “taboo” topic, beating out HIV, obesity, mental illness, and substance abuse ("State of Genital Herpes 2007: Personal Story and Societal Stigma," 2007). Most respondents indicated that they would avoid a relationship with a person infected with genital herpes and would break up with a person if they knew the person had genital herpes.

In discussing the disproportionate fear and stigma associated with genital herpes, a clinical professor of medicine at the University of Washington and a prominent STI expert, H. Hunter Handsfield admits, "I don't know why genital herpes has this pariah, fearful component to it...herpes is, in fact, the same disease as our cold sores and fever blisters around the mouth, but we don't react emotionally the same way" (Sloan, 2008, p. 1). The fact that the stigma of genital herpes has persisted with such vigor has been attributed to a number of factors, including pharmaceutical company-driven media campaigns (Posner, 2000), herpes' portrayal in popular media (Roberts, 1997), the innocuous but sometimes irritating nature of the virus, the fact that it is acquired through sex and resides on the genitals, and the fact that those who acquire genital herpes are typically painted, not as victims, but rather as promiscuous, stupid, or immoral people who deserve to have caught the virus (Roberts, 1997). A search for the word “herpes” in the Internet Movie Database (IMDb) reveals a long list of films that perpetuate this stigma

(<http://www.imdb.com>). In his article published in *The Atlantic*, Jon Fortenbury (2014) sums up the unusual status of genital herpes:

Herpes has a unique stigma among sexually transmitted diseases. HIV/AIDS is stigmatized, but few laugh at people who have it because it's a serious illness. HPV can lead to cancer, on occasion, and women [and men] get tested regularly for it, making it no joke to most. Chlamydia, syphilis, crabs, scabies, and gonorrhea are sometimes the target of jokes, but these STDS are typically curable, so people won't have to endure the annoyance for too long. Genital herpes, though, isn't curable, is thought of as a disease only the promiscuous and cheating-types get, and is a popular joke topic. (p. 1)

Not surprisingly, those who learn that they have acquired genital herpes often experience significant psychosocial distress, including anxiety, guilt, shame, loss of self-esteem, self-loathing, and a pronounced fear of being rejected romantically and sexually (Gupta, Warren, & Wald, 2007; Jadack, Keller, & Hyde, 1990; Kimberlin & Rouse, 2004; Mindel & Marks, 2005; Swanson, Dibble, & Chenitz, 1995). This distress clearly stems much more from internalized stigma (e.g., "I'm repulsive," "I'm disgusting") and from anticipated stigma (e.g., "people will reject me when they find out," "people will think I'm disgusting"), than from any physical symptoms or health risks associated with the virus itself.

What has yet to be well-explored is to what extent anticipated stigma is at all warranted. That is to say, will a significant number of people "enact" stigma by rejecting an individual, romantically or sexually, based solely on a fairly harmless skin condition that has been contracted, in one strain or another, by some 90% of the world population?

Purpose

The negative impact of internalized and anticipated stigma of genital herpes is well-documented, yet little is known about the enacted stigma of herpes. The purpose of this study was to answer three major research questions:

1. To what extent, if any, will a target's herpes status have on a participant's romantic behavior intentions toward that target?
2. To what extent, if any, will a target's herpes status have on a participant's sexual behavior intentions toward that target?
3. Do people possess more stigmatizing attitudes about genital herpes than oral herpes?

Though the previously cited Harris-Interactive poll suggests that public attitudes about genital herpes are highly stigmatizing, polls of this nature are often subject to self-selection biases (Bethlehem & Biffignandi, 2011). And while a few descriptive survey studies have been conducted assessing general knowledge and attitudes about genital herpes (Bruce & Bullins, 1989; Lewis, Rosenthal, Succop, Stanberry, & Bernstein, 1999; Mirotznik, 1991), none of these studies measured enacted stigma and none employed an experimental design. As such, it should seem that the enacted stigma of herpes be investigated experimentally, in a randomized controlled study with a sample that lacks a priori knowledge of the specific survey topic. The present study employs these much needed experimental controls in order to measure stigmatizing attitudes about herpes and, more importantly, romantic and sexual behavior intentions directed toward targets described as having herpes.

Need and Rationale

Medically speaking, genital herpes is rarely ever cause for any concern (Fanfair et al., 2013); however, the internalized and anticipated stigmas that often arise as a result of acquiring genital herpes are the source of significant psychosocial distress for many infected individuals (Kimberlin & Rouse, 2004). Research indicates that those who contract STIs, including genital herpes, often choose not to disclose their STI status to current or prospective romantic and sexual partners for fear of being stigmatized and rejected (Hood & Friedman, 2011). In their study on the impact of stigma on STI disclosure, Bickford, Barton, and Mandalia (2007) found that only 54% of participants with genital herpes disclosed their STI status with all sexual partners, and of these same respondents, 31% admitted to always disclosing sometime *after* a first sexual encounter. Stigma clearly creates a barrier to disclosure, thus also increasing the likelihood of transmission. By investigating enacted stigma and comparing stigmatizing attitudes about oral and genital herpes, it is hoped that the present work will inform future research aimed at better understanding, and ultimately reducing, the social stigma of herpes. Though there is evidence to suggest that reducing the social stigma of STIs may result in greater disclosure and, by extension, reduced transmission (Bickford, Barton, & Mandalia, 2007), endeavoring to understand and reduce social stigma in order to reduce psychosocial distress should seem sufficient enough cause, irrespective of whether it ever results in any reduction in virus transmission.

Hypotheses

For these reasons, a study was proposed and the following three hypotheses were tested:

Hypothesis 1. Participants will be less willing to pursue romantic relationships with targets said to have genital herpes compared with targets said to have oral herpes or no herpes.

Hypothesis 2. Participants will be less willing to have sex with targets said to have genital herpes compared with targets said to have oral herpes or no herpes.

Hypothesis 3. Participants will possess more stigmatizing attitudes about genital herpes than oral herpes.

In Chapter 2, I provide a literature review of herpes viruses, as well as discuss the ways in which stigma theory relates to the stigma of herpes; Chapter 3 outlines the research methods employed in this study; in Chapter 4, I present the study results; and in Chapter 5, I discuss the main findings, study limitations, and suggestions for future research.

Chapter 2 – Literature Review

Herpes Viruses

Although the mention of herpes likely prompts most people to automatically think of the genital variety, there are, in fact, over 130 different types of herpes viruses (Brown & Newcomb, 2011). Eight of these are known to affect humans (Carter & Saunders, 2013), and of these eight, five are extremely common, affecting about 90% of the world population (Chayavichitsilp, Buckwalter, Krakowski, & Friedlander, 2009). These five pervasive viruses include HSV-1, which predominantly causes oral herpes, or what we euphemistically refer to as “cold sores”; HSV-2, responsible for most cases of genital herpes; Varicella Zoster Virus (VZV), which causes both chicken pox and shingles; the Epstein-Barr virus (EBV), responsible for mononucleosis; and Human Cytomegalovirus (HCMV).

It is important to note that since it is sometimes, though less often, the case that HSV-1 manifests in the form of genital herpes, and since it is sometimes, though very rarely ever, the case that HSV-2 manifests as oral herpes (Bruce, 2004), for the purposes of this study, I have decided to make a distinction between “oral herpes” and “genital herpes,” rather than make a distinction between HSV-1 and HSV-2. Although the differences between HSV-1 and HSV-2 are discussed briefly within this literature review, this study is concerned more with disparities in perception (i.e., stigma) that arise when herpes manifests genitally versus orally. Furthermore, since an individual who has acquired genital herpes (whether from HSV-1 or HSV-2) is much more likely to experience notable psychosocial distress (e.g., anxiety, guilt, shame, fear of rejection, etc.) than an individual who has contracted oral herpes, it is more helpful to speak in

terms of oral versus genital herpes. It is for this reason that the language used in all materials presented to participants in this study's conditions only distinguishes virus types according to bodily location (i.e., "oral herpes" or "genital herpes").

Though they are usually perceived very differently, both HSV-1 and HSV-2 are very similar and are categorized under the same sub-family of herpes viruses called *herpes simplex virus*. HSV-1 is extremely prevalent, with about 50% of U.S. children becoming infected before the age of 5 and approximately 90% of Americans becoming infected by middle age (Wald, 2006). HSV-1 can also manifest as genital herpes and is doing so increasingly; however, it typically manifests orally (Balasubramaniam, Kuperstein, & Stoopler, 2014).

HSV-2, which almost always manifests as genital herpes, can also manifest as oral herpes, though this is rarely ever the case (Bruce, 2004). As is mentioned in the introduction, approximately 16% of people between 14 and 49 years of age in the U.S. (over 50 million people) are infected with HSV 2, with an estimated 750 thousand new cases reported annually (CDC, 2010). Yet, studies indicate that over almost 90% of those who have acquired genital herpes are unaware of the fact that they have it, since they exhibit no symptoms, or their symptoms are so mild as to go undetected (CDC, 2010; Schillinger et al., 2008).

The majority of those who do experience symptoms find that their symptoms are effectively managed with antiviral medication, with outbreaks either ceasing altogether or recurring very rarely—perhaps once or twice yearly (Patel, 1997). This leaves a comparatively small percentage of infected individuals who do experience, to a greater or lesser extent, some symptoms. Because most people are unaware that they have the virus, and because most of those

who are aware that they have the virus are usually able to find relief from medicine, it is only a comparatively small percentage of infected individuals who actually contend with any notable physical symptoms.

The other three common human herpes viruses are Varicella Zoster Virus (VZV), or human herpesvirus type 3 (HHV-3), responsible for Chicken Pox and Shingles; Epstein-Barr Virus (EBV), or human herpesvirus 4 (HHV-4), which causes infectious mononucleosis or “mono”; and Human Cytomegalovirus (HCMV), or human herpesvirus-5 (HHV-5). As is the case with HSV-1 and HSV-2, antibodies for some of these other herpes viruses can be found in upwards of 90% of people (Chayavichitsilp, Buckwalter, Krakowski, & Friedlander, 2009; Sample et al., 1990), yet these viruses are also typically harmless, and symptoms are usually easily managed with medication.

In summary, although herpes viruses are prevalent, they are also typically quite benign. It is only in extremely rare instances that herpes of any type leads to any notable physical health problems. Since oral and genital herpes are so similar in their characteristics (e.g., symptoms, response to medicine, etc.), what arguably distinguishes genital herpes most from oral herpes is its preferred location of residence on the body (i.e., genitals) and the method of its acquisition (i.e., sexual activity). Despite genital herpes being no more medically concerning than oral herpes or any of the other herpes viruses, it appears to garner much more stigma.

The Social Stigma of Genital Herpes

Goffman (1963) argued that there are two types of potentially stigmatized individuals: those who are *discredited* and those who are *discreditable*. In the former case, an individual's stigma or "mark" has already been revealed and therefore affects his or her behavior and also affects the behavior of others. In the latter case, an individual's mark has yet to be revealed. He may choose to reveal it, or it may be revealed by factors outside of his control. In the context of the present work, people infected with genital herpes would be considered "discreditable" until such time as they disclose their STI or are found out, at which time they would then be categorized as "discredited." Yet, disclosure typically occurs only between intimate partners and perhaps amongst very close and trusted friends. Individuals infected with genital herpes who have been "discredited" are, therefore, not wearing a so-called "scarlet letter" for all the world to see; there are no outward indicators of infection in the majority of infected individuals, and of those who do experience outbreaks, lesions can easily be hidden under clothing.

Building on Goffman's work, Jones et al. (1984) identified and emphasized six key dimensions to social stigma: concealability, the course of the mark, disruptiveness, aesthetics, origin, and peril. The first of these, *concealability*, which was mentioned previously, entails the extent to which an individual can hide his or her stigmatizing mark. With respect to genital herpes, the mark could be blisters/lesions or perhaps a medical record indicating seropositive test results for HSV-2. As I have suggested, these indicators can be, and usually are, fully concealed in most instances.

Disclosing a concealable stigma can be a complex and highly anxiety-provoking decision (Chaudoir, 2013; Pachankis, 2007; Quinn, Chaudoir, & Simpson, 2009). For many infected individuals, the fear of rejection and stigmatization leads them to keep their STI status hidden from sexual partners, while others avoid dating or engaging in sexual activity altogether (Bickford, Barton, & Mandalia, 2007; Newton & McCabe, 2008). Because almost 90% of people who have acquired genital herpes are asymptomatic (CDC, 2010; Schillinger et al., 2008), the mark is usually concealed, knowingly or otherwise, during times of sexual intimacy. Thus, irrespective of whether an individual is unaware of the fact that they even have herpes, or whether they are willfully choosing not to disclose their herpes status, the mark can usually be concealed quite effectively, though not without cognitive dissonance in the latter case. Research indicates that almost 50% of individuals with genital herpes who are *aware* of the infection do not disclose their STI status to their sexual partners prior to engaging in sexual activity for fear of being rejected or stigmatized (Bickford, Barton, & Mandalia, 2007; Newton & McCabe, 2008). Clearly this raises many ethical concerns, but the point here is that it is typically *possible* to conceal the mark in most instances.

Unlike genital herpes, an oral herpes outbreak is usually more difficult to conceal, since the mark typically manifests around the mouth and lips. In this case, the only option is either to employ the help of makeup (e.g., concealer, foundation, lipstick, etc.) or perhaps to cup or obscure one's mouth from view when in close proximity to others—admittedly, an unrealistic and awkward option for most people. Yet, since it is likely the case that most people are not aware of the fact that “cold sores” are actually a type of herpes—though this remains to be

seen—the distress associated with having a “cold sore” is presumably much less notable than the distress associated with having a genital herpes outbreak.

The *course of the mark* pertains to whether the prominence of the mark increases, decreases, or remains steady over time. With herpes, most people who do exhibit visible symptoms (approximately 10-15% of infected individuals) typically find that the first outbreak is the most severe and find that subsequent outbreaks decrease in number, severity, and duration. For many people, outbreaks eventually cease altogether (CDC, 2010). Despite the fact that most people will become mostly or even entirely asymptomatic over time, the virus still remains dormant in the body. Furthermore, although the mark may entirely cease to be visible to the naked eye, there always remains a chance that the virus can be spread through asymptomatic shedding (Koelle & Wald, 2000).

A stigma’s *disruptiveness* is concerned with the degree to which that stigma, or people’s reaction to it, disrupts an individual’s social interactions. The degree to which genital herpes is disruptive will vary from person to person, depending upon whether the infected individual is aware that he or she is infected, how a partner or a potential partner reacts to learning of the condition (assuming it is disclosed), how sensitive the infected person is to the opinions of others, and a host of other situational and dispositional factors. In general, however, research clearly indicates that knowing that one has acquired genital herpes can be, and often is, highly psychosocially disruptive, resulting in moderate to severe anxiety, shame, guilt, self-loathing, and a pronounced fear of rejection (Gupta, Warren, & Wald, 2007; Jadack, Keller, & Hyde, 1990; Mindel & Marks, 2005; Swanson, Dibble, & Chenitz, 1995).

Aesthetics pertains to that which we find attractive or pleasant to our senses. In terms of a person's physical beauty, this could include sensual curves, chiseled symmetrical features, and so forth. With the exception of the appearance of an outbreak itself (i.e., typically a rash of tiny blisters on or near the genitals or mouth), people infected with herpes do not look different from people who are not infected. As was already mentioned, oral herpes is more difficult to conceal, though in its typical manifestation, it produces little more than a small sore on or around the mouth that may be concealed with the aid of makeup. Thus, while this particular dimension of stigma applies to people who are, for instance, significantly disfigured or, perhaps, very physically unattractive, it is less relevant to stigma stemming from genital herpes or even oral herpes, for that matter.

The *origin* of the stigmatizing condition or mark is of some importance, since this can heavily influence others' perception of the stigmatized person as either culpable or innocent (Weiner, Perry, & Magnusson, 1988). For example, one may be tempted to feel more justified in stigmatizing a career criminal than, say, an individual who has become physically impaired as the result of a hit-and-run drunk driver. Whether rightly or wrongly, we will probably be more inclined to make an internal attribution in the former case (e.g., "The criminal has a character flaw and *chose* a life of crime") and respond with anger and make an external attribution in the latter case. (e.g., "The physically impaired person is an unfortunate victim of circumstances") and respond with empathy and pity. An individual who is infected with genital herpes is not usually perceived as a victim, since the infection is not usually perceived to have come about as the result of an accident or an injustice. Consequently, because the infected individual is assumed to be complicit in acquiring the stigmatizing mark, others are much more inclined to make an

internal attribution, typically one that is unsavory (e.g., “She’s a slut and, therefore, deserved to catch herpes.”). As such, infected individuals are often the target of ridicule (Foster & Byers, 2013).

Peril involves the degree of threat or danger—whether real or imagined—that others perceive a person’s stigma to pose to them. Since herpes is contagious, and since most people are uneducated about the particulars of the virus (e.g., the fact that herpes is common, almost always harmless, rarely symptomatic, easily managed, etc.), it stands to reason that people might tend to be quite nervous about contracting it, especially genital herpes. While it is true that engaging in sexual activity with a person infected with genital herpes naturally comes with added risks of acquiring the virus, it is also true that these risks are, in most cases, relatively low and can be reduced significantly by taking proper preventative measures.¹

Antiviral medication is one such measure. In a large longitudinal study of 1484 couples, Corey et al. (2004) found that valacyclovir significantly reduced the transmission of infection among heterosexual, HSV-2-discordant couples (i.e., only one person in each couple was infected). The authors explain that “acquisition of HSV-2 was observed in 14 of the susceptible

¹ Interestingly, while the CDC provides an extensive description of genital herpes (e.g., what it is, how it is caught, how to avoid catching it, health risks, etc.), it provides no such information about oral herpes—not a single page is dedicated to describing oral herpes or to providing advice about how to avoid contracting it. This should seem like a double-standard, considering their similarities from a medical standpoint.

partners who received valacyclovir (1.9 percent), as compared with 27 (3.6 percent) who received placebo” (Corey et al., 2004, p. 11). What is perhaps most surprising about the results of this study is that, while transmission of infection occurred in 0.35 out of every 1000 sexual contacts for those in the valacyclovir group, they still only occurred in 0.65 out of every 1000 contacts for those in the placebo group. In other words, the odds of catching genital herpes from a one-time sexual encounter with an infected sexual partner who is *not* taking suppressive antiviral medication is still less than 1 in 1000 sexual contacts. It should also be noted that throughout the entire duration of this eight-month study, a full 37% of the couples admitted to *never* using condoms; 43% reported using condoms sometimes (between 1% to 90% of the time); and only 20% of the couples reported using condoms more than 90% of the time. In short, statistically speaking, the risk of acquiring HSV-2 from a one-time sexual encounter was quite small. This is by no means meant to suggest that people should engage in indiscriminate, casual sex with numerous strangers without concern for condom use or medication (in the cases of those who are known to be infected); rather, when considering the differentiation between “real” and “imagined” peril posited by Jones et al. (1984), it suggests that the real peril or risks of acquiring HSV-2 may be considerably less perilous than that of the imagined peril.

If sexual contact is avoided during outbreaks, condoms are used regularly, and medication is taken daily by infected partners, the odds of transmitting the infection are significantly reduced (Corey et al., 2004). Thus, in many instances, it seems as though the fear that people have of catching herpes may be incommensurate to the actual risks. Furthermore, while the risk of acquiring herpes is real, there are almost never any real *dangers* that arise as a result of having herpes. In the very rare instances when potential dangers can arise (e.g., an

expectant mother exhibiting signs of a herpes outbreak at the time of delivery, which could result in the newborn contracting neonatal herpes), these risks can all but be eliminated by taking proper preventative measures (Guidelines for the management of herpes simplex virus in pregnancy, 2009).

In sum, Goffman's notion of the "discredited" and "discreditable" comports with the analysis of the stigma of genital herpes, with most infected individuals falling into the latter of these two categories. Furthermore, most of the six domains of social stigma proposed by Jones and his colleagues are relevant to the stigma of genital herpes, with concealability, disruptiveness, origin, and peril being particularly germane.

Chapter 3 – Research Methods

Design

This study involved a 3 (herpes condition: *oral herpes*, *genital herpes*, *no herpes*) x 2 (participant gender: *male* or *female*) x 2 (target physical attractiveness: *average* or *attractive*) design, resulting in a total of 12 conditions. Participant gender and target physical attractiveness were included in the regression analyses as moderating variables. All factors were categorical, between-subject factors. This study employed an experimental design with random assignment.

Participants

Participants were recruited through Amazon's Mechanical Turk (MTurk). MTurk is an online job center that has become a viable source of research participants for an increasing number of behavioral scientists (See Appendix A). There are currently estimated to be over 500,000 MTurk workers (called *Turkers*) completing a variety of different jobs or *Human Intelligence Tasks (HITS)*. Most employers who advertise on MTurk do so in order to recruit large numbers of workers to complete small or repetitive tasks for small sums of money. For example, a marketing company might hire several thousand *Turkers* at a rate of 25 cents each to complete a short survey or rate product images. As such, MTurk is a cost-effective way to get work completed quickly. Research suggests that samples obtained from MTurk are demographically diverse and tend to be more representative of the general public than university obtained samples (Kittur, Chi, & Suh, 2008; Ross, Irani, Silberman, Zaldivar, & Tomlinson, 2010; Paolacci, Chandler, & Ipeirotis, 2010; Ross et al., 2010). More specifically, MTurk workers (commonly referred to as "Turkers") are demographically very similar to the U.S.

Internet-using population (Ross et al., 2010) in that, compared to the general population, they are more likely to identify as democrat than republican; they are less likely to affiliate with a major religion; they are less likely to be married; and they are more liberal-leaning in ideology (Berinsky, Huber, & Lenz, 2012). For a more in-depth discussion of the merits of using MTurk to recruit research samples, see Buhrmester, Kwang, and Gosling, (2011); Casler, Bickel, and Hackett (2013); Kittur, Chi, and Suh, (2008); Mason and Suri (2012); Paolacci, Chandler, and Ipeirotis (2010); Peer, Vosgerau, and Acquisti (2014); and Ross et al. (2010).

Prior to recruiting participants, it was decided that the focus of this study would be limited to heterosexual U.S. residents. Six hundred seventeen participants² were initially recruited for this study, but the data for 178 of these respondents was removed for the following reasons: bisexual participants ($n = 49$); individuals submitted more than one survey ($n = 47$); participants failed to complete the entire study procedure ($n = 40$); homosexual participants ($n = 19$); non-US citizens ($n = 8$); participants requested that their responses be removed from the study ($n = 2$); and participants answered an attention check question (ACQ)³ incorrectly ($n = 13$). With these participants removed, the final sample size was 439.

² I recruited a much larger sample than recommended by my power analysis (i.e., $N = 420$) in order to account for attrition, non-qualified respondents, etc.

³ Studies indicate that attention check questions (ACQs) are effective in screening out inattentive respondents (Aust, Diedenhofen, Ullrich, & Musch, 2013; Buhrmester, Kwang, & Gosling, 2011). Furthermore, since respondents do not know if or when additional ACQs will appear in a

Of the 439 participants whose data were ultimately included in this study's analyses, 251 were male (57.2%) and 188 were female (42.8%); ages ranged from 18-74 ($M = 36.06$, $SD = 10.611$). Regarding racial background, the sample was fairly representative of the U.S. general population, though some major groups (e.g., African Americans, Hispanic/Latinos) were somewhat underrepresented (76.1% Caucasian; 8.9% Asian American; 6.6% African American; 4.3% Hispanic/Latino; less than 2% Indian/Pakistani, Middle Eastern, Multiracial, Native American, Pacific Islander, and Other).

Sample size was determined by running an a priori analysis using G*Power 3.1.9 statistical software (Faul, Erdfelder, Lang, & Buchner, 2007) with the following assumptions: ANOVA with 12 groups, effect size = 0.25 (Medium), $\alpha = 0.05$, and Power = 0.95. This power analysis yielded a recommended sample size of 420 participants. All participants were compensated with a small sum of money for their participation.

Measures

All surveys were designed and administered using Qualtrics software, Version 9340538. Copyright © 2015 Qualtrics. Qualtrics and all other Qualtrics product or service names are registered trademarks or trademarks of Qualtrics, Provo, UT, USA. <http://www.qualtrics.com>. Participants completed the following measures in a fixed order.

survey, ACQs have also been shown to increase participant attention (Oppenheimer, Meyvis, & Davidenko, 2009). For these reasons, I included one ACQ ("I once suffered a fatal heart attack while watching TV") in each version of the herpes attitudes scale (HAS).

Demographic survey (DS). This 11-item demographic survey (see Appendix B) asks respondents to report their age, gender, ethnicity, marital status, sexual orientation, education, income, political affiliation, religious beliefs, degree of religiosity, and degree of conservatism/liberalism.

Romantic/Sexual behavior survey (RSBS). This variable-length 1-7 item survey (see Appendix C) first asks respondents to indicate their willingness to pursue various relationship types with a target (i.e., friendship, one-time date, dating casually, dating regularly, committed relationship, marriage/life partner, one-night stand, and none of the above). Assuming that participants indicate a willingness to pursue one or more of the romantic relationship types with a target (i.e., they select anything other than “none of the above” or “friendship”), respondents are then asked to indicate whether they would be willing to have sex with the target for each of the romantic relationship types that they have selected. For instance, if a respondent indicates “none of the above” or “friendship” for Q1, no further questions on the RSBS are generated and the participant is directed to the next measure in the study. If, on the other hand, a respondent indicates, for example, that he or she is willing to go on a “one-time date” with a target, the respondent is then only asked to indicate whether he or she would be willing to have sex with the target on a one-time date. If respondents indicate that they would be willing to pursue more than one type of romantic relationship with a target (e.g., one-time date, date casually), they are then asked whether they would be willing to have sex with the target in each of those indicated relationship types (e.g., one-time date, date casually).

Herpes attitudes scale (HAS). Developed by Bruce and McLaughlin (1986), the HAS is a 40-item, Likert-type scale that measures stigmatizing attitudes about genital herpes (See

Appendix D). Since participants in this study were randomly assigned to one of three different herpes conditions (i.e., oral herpes, genital herpes, no herpes), it was necessary to adapt the HAS wording to account for the oral herpes condition (see Appendix E). This was accomplished by replacing all instances of the word *genital* with the word *oral*. Additionally, since the HAS was developed in 1986, some of its terminology is now considered antiquated. Specifically, *Sexually Transmitted Disease (STD)* is now commonly termed *Sexually Transmitted Infection (STI)*. In an effort to ensure that the HAS is consistent with contemporary terminology, I changed the word *disease* to *infection* in Q4 and Q28. Additionally, because the HAS instructions were originally worded as a paper form (e.g., “please note on the answer sheet”), I adapted the wording of the instructions to account for electronic completion. Participants who were assigned to the “no herpes” condition were randomly assigned to complete either version of the HAS. The internal consistency of the HAS has previously been shown to be good (*Cronbach’s* $\alpha = 0.91$). In the present study, the internal consistency for both the genital herpes version (*Cronbach’s* $\alpha = 0.91$) and the oral herpes version (*Cronbach’s* $\alpha = 0.94$) of the HAS were also good.

Stimuli

Target images. Stimuli include images of one physically attractive female, one physically average female, one physically attractive male, and one physically average male (see Figures 1– 4). All images were in the “public domain” and were obtained through an online image search with appropriate search filters in place. In a pilot study, these images were rated for physical attractiveness by a sample ($N = 256$) of University of Hawaii undergraduate students. Images were rated on a 7-point Likert-type scale, ranging from “Very unattractive” to “Very attractive.” It was determined in advance that a target image would qualify as “Average” if that

target received a mean PA rating of between three and five points on the scale (i.e., 3 = Somewhat unattractive, 4 = Neither attractive nor unattractive, and 5 = Somewhat attractive); a target image would qualify as “Attractive” if the image received a mean PA rating of between six and seven points on the same scale (i.e., 6 = Attractive and 7 = Very attractive). The PA ratings obtained from the pilot study and from the current study are similar (see Table 1). Furthermore, all mean target ratings fit well within the predetermined upper and lower limits just described. Because data from bisexual and homosexual respondents were not included in this study, all participants who were included in this study’s analyses ($N = 439$) were shown opposite gender target images (i.e., male participants saw female targets and female participants saw male targets).

Vignettes. Three vignettes were created describing the targets as possessing desirable qualities and characteristics (e.g., good personality, solid career, intelligence, etc.) and describing targets as either having *oral herpes*, *genital herpes*, or *no herpes* (see Appendices F-K). The oral herpes and genital herpes vignettes are approximately a half-page in length, with the no herpes vignette being approximately a quarter-page in length. With the exception of herpes type (and the inclusion of supplemental information pertaining only to nature of herpes in the oral and genital herpes conditions), targets are otherwise described using the same verbiage.⁴

⁴ Male and female versions of each of these three vignettes were created so that male targets were described using a male personal pronoun (i.e., he) and female targets were described using a female personal pronoun (i.e., she). I have included male and female versions of these three vignettes in the appendices.

Procedure

After this study was approved by the University of Hawaii Internal Review Board (IRB), I posted the study on Amazon’s Mechanical Turk (MTurk) website (see Appendix L for examples of how Human Intelligence Task (HIT) advertisements appear on MTurk). Human Intelligence Tasks, or HITs, that are posted on MTurk inform “Turkers” (i.e., MTurk workers) of the amount of pay they can expect to receive for completing a given HIT (in the present case, the HIT entailed participating in a research study); the amount of time a given HIT is expected to take to complete; the nature of the HIT (e.g., complete a survey, rate images, spell-check content, etc.); and, in the case of this HIT, it cautioned Turkers about the “adult” nature of the study. Turkers who were interested in knowing more about the study were instructed to “click” on the study advertisement. Those who chose to “click” on the advertisement were then presented with an informed consent form outlining study details (see Appendix M). For those who were interested in participating in the study, they were instructed to “click” a hyperlink located at the bottom of the informed consent form.

Turkers who chose to participate in the study—who I will henceforth refer to as *participants* or *respondents*—were first directed to read basic survey instructions (see Appendix N). Participants were given an option at the bottom of every page to either *EXIT SURVEY* or *CONTINUE* as they navigated through the survey. The order in which scales and stimuli were presented to participants was fixed throughout the procedure in all conditions: Participants (1) completed the 11-item Demographic Survey; (2) were presented with an opposite gender target

image along with a question prompting respondents to rate the target's physical attractiveness⁵; (3) were presented with the same target image accompanied by a randomly assigned vignette describing targets as either having, oral herpes, genital herpes, or no herpes; (3) completed the 7-item Romantic/Sexual Behavior Scale (RSBS) accompanied by the same target image; (4) and completed one of two versions (i.e., oral herpes or genital herpes) of the 40-item Herpes Attitudes Scale (HAS), which also included an attention check question (ACQ). Once participants had completed the experimental procedure, they were shown the Debriefing Consent Form (see Appendix O). On average, it took participants approximately 10 minutes to complete the entire study procedure.

Statistical Analyses

A logistic regression was conducted to test hypothesis 1. Predictor variables included in the model were all categorical and included herpes status (*oral herpes, genital herpes, or no herpes*), participant gender (*male or female*), and target physical attractiveness (*attractive or average*). The categorical outcome variable was romantic behavior intentions (*willing to have a relationship with a target or unwilling to have a relationship with a target*). An additional

⁵ When participants were initially shown target images, these images were accompanied by a single question. Male respondents were asked, "How would you rate the physical attractiveness of the woman in this photo?" while female respondents were asked, "How would you rate the physical attractiveness of the man in this photo?" Responses were given on a 7-point Likert-type scale ranging from "Very attractive" to "Very unattractive."

logistic regression analysis was conducted to test hypothesis 2. All predictor variables were the same as in the first model, however, the categorical outcome variable was now sexual behavior intentions (*willing to have sex with a target or unwilling to have sex with a target*). For hypothesis 3, one-way ANOVA was conducted to test differences in stigmatizing attitudes toward oral and genital herpes.

Chapter 4 – Results

Hypothesis 1

According to hypothesis 1, *participants will be less willing to pursue romantic relationships with targets said to have genital herpes compared with targets said to have oral herpes and targets not said to have herpes*. A logistic regression was conducted predicting participant romantic behavior intentions from target herpes status, participant gender, target attractiveness, and interactions between all of these measures. The outcome variable was coded as “0” in cases where participants were not willing to pursue a romantic relationship and coded as “1” in cases where participants were willing to pursue a romantic relationship.

As shown in Table 1, the effects of genital herpes, oral herpes, target attractiveness, and the interaction between gender and target attractiveness were all statistically significantly associated with romantic behavior intentions. However, because participants were not significantly less likely to pursue romantic relationships with genital herpes targets than with oral herpes targets ($p = .335$), hypothesis 1 is only partially supported.

Main effect of herpes status. First, with regard to the impact of herpes status, with “no herpes” omitted from the analysis as the comparison category, the odds of a participant indicating an intention to pursue a romantic relationship with a target described as having genital herpes were reduced by a factor of .297. Additionally, the odds of a participant indicating an intention to pursue a romantic relationship with a target described as having oral herpes were reduced by a factor of .157. In other words, participants were significantly less willing to pursue romantic relationships with targets said to have either oral or genital herpes compared with

targets who were not said to have herpes, with genital herpes having a somewhat greater attenuating influence on romantic behavior intentions. No significant interaction effects were found between participant gender and herpes status or between target attractiveness and herpes status.

Hypothesis 2

According to hypothesis 2, *participants will be less willing to have sex with targets said to have genital herpes compared with targets said to have oral herpes and targets not said to have herpes*. A logistic regression analysis was conducted which focused upon sexual behavior intentions (i.e., willingness to have sex with targets) as the outcome variable. The outcome variable was coded as “0” for cases in which participants were unwilling to have sex with a target and coded as “1” for cases in which participants were willing to have sex with a target. The set of main effects and interaction effects included as predictors in this analysis were identical to those included in the previous model. As shown in Table 3, the effects of genital herpes, oral herpes, target attractiveness, as well as the interaction between genital herpes and target attractiveness, and respondent gender and target attractiveness were all significantly associated with sexual behavior intentions. Here, again, participants were not significantly less likely to have sex with genital herpes targets than with oral herpes targets ($p = .999$), so hypothesis 2 is only partially supported, as well.

Main effect of herpes status. With “no herpes” set as the comparison category, the odds of a participant indicating an intention to have sex with a target described as having genital herpes were reduced by a factor of .228, while the odds of a participant indicating an intention to have sex with a target described as having oral herpes were reduced by a factor of .168. Thus,

respondents were significantly less likely to have sex with targets said to have either oral or genital herpes compared with targets not said to have herpes.

Interaction effect between herpes status and target attractiveness. Next, the interaction between genital herpes status and target attractiveness was found to achieve statistical significance, having a negative unstandardized regression coefficient. This result indicates that the effect of a target's attractiveness on a participant's willingness to have sex was significantly attenuated when a target was described as having genital herpes. Therefore, good looks mattered, but they appear to have mattered significantly less so when an attractive target was said to have genital herpes.

Hypothesis 3

According to hypothesis 3, *participants will possess more stigmatizing attitudes about genital herpes than oral herpes.*⁶ There was a statistically significant difference between genital

⁶ Participants were assigned to read *oral herpes*, *genital herpes*, or *no herpes* vignettes, which were each associated with a randomly selected target image. Participants who read the oral herpes vignettes were then directed to complete an oral herpes version of the Herpes Attitudes Scale (HAS); participants who read the genital herpes vignettes were then directed to complete a genital herpes version of the HAS; and participants who read the no herpes vignettes were then *randomly assigned* to complete either an oral herpes or genital herpes version of the HAS. Therefore, all participants completed one of the two versions of the HAS. I excluded participants in the *no herpes* condition from this analysis on the basis that their priming condition was qualitatively different from the other two priming conditions.

herpes stigma and oral herpes stigma as determined by one-way ANOVA ($F(1,270) = 7.013, p = .009, \text{effect size } \eta^2 = 0.025$). The higher the scores are on the herpes attitudes scale (HAS), the less stigmatizing the attitudes that participants possess about herpes. Therefore, participants in the genital herpes condition ($M = 189.19, SD = 28.81$) indicated more stigmatizing attitudes compared to those in the oral herpes condition ($M = 199.51, SD = 35.20$). This indicates that genital herpes is more stigmatized than oral herpes. Hypothesis 3 is supported, though it is worth noting that the results of hypotheses 1 and 2 suggest that oral and genital herpes may both be highly stigmatizing.

Chapter 5 - Discussion

Answers to Research Questions

The present study was conducted in order to answer three primary research questions: First, to what extent, if any, will a target's herpes status have on a participant's romantic behavior intentions toward that target? Next, to what extent, if any, will a target's herpes status have on a participant's sexual behavior intentions toward that target? And finally, do people possess more stigmatizing attitudes about genital herpes than oral herpes? Given that the effects of gender and physical attractiveness have been well-documented in previous research related to romantic and sexual behavior in general (Berscheid & Walster, 1974; Buss, 2003; Buss & Schmitt, 1993; Elder, 1969; Fisher & Cox, 2009; Gangestad & Simpson, 2000; Kenrick, Groth, Trost, & Sadalla, 1993; Li & Kenrick, 2006; Symons, 1979; Trivers, 1972) as well as in the context of sexual risk taking behavior in particular (Agocha & Cooper, 1999; Blanton & Gerrard, 1997; Hennessy, Fishbein, Curtis, & Barrett, 2007; Kruse & Fromme, 2005; Lennon & Kenny, 2013), these variables were included as moderating variables in the regression analyses. Although results found significant interaction effects between participant gender and target attractiveness in both regression analyses, only the significant interaction between target attractiveness and herpes status found in the second of these analyses is relevant to the interests of this study. As such, only this interaction is reported in the previous results section and only it is mentioned in this discussion.

Romantic behavior intentions. In support of hypothesis 1, participants were significantly less willing to pursue romantic relationships with genital herpes targets than with no

herpes targets. However, they were also significantly less willing to pursue romantic relationships with oral herpes targets. In fact, the difference between willingness of participants to pursue romantic relationships with oral herpes and genital herpes targets was negligible. Since it was assumed that genital herpes is much more socially stigmatized than oral herpes, it was expected that something as quotidian as oral herpes (i.e., “cold sores”) would exert minimal influence over a respondent’s interest in pursuing a romantic relationship with a target said to have it. The fact that this was not the case is explored in much greater depth in the general discussion.

Sexual behavior intentions. It was expected that participants would be less willing to have sexual intercourse with genital herpes targets than with oral herpes and no herpes targets. While there was a significant difference between sexual behavior intentions toward genital herpes targets and no herpes targets, there was no notable difference between sexual behavior intentions toward genital herpes targets and oral herpes targets. Thus, in the same way that participants were much less willing to pursue romantic relationships with oral herpes targets than with no herpes targets, participants were also much less willing to have sex with oral herpes targets than with no herpes targets. This, once again, is very surprising and will be explored in the general discussion.

A significant interaction effect was found between target attractiveness and target herpes status. Specifically, a participant’s willingness to have sex with an attractive target was dramatically reduced when that target was also described as having genital herpes. Therefore, while good looks are an otherwise powerful asset, such prized beauty appears to be much less enticing when that attractive individual is carrying the weighty liability of genital herpes.

Herpes stigma. Although the mean difference in HAS stigma scores indicates that genital herpes is more stigmatized than oral herpes, it is still surprising to find that this difference, while statistically significant, is still relatively small, suggesting that both herpes types are highly stigmatized. This notion appears to be supported by the results of hypotheses 1 and 2, in which participants were much less likely to form relationships and have sex with targets said to have either oral or genital herpes.

General discussion

When participants were presented with targets described as having genital herpes, they were much less interested in pursuing anything romantically or sexually with them compared with participants who saw no herpes targets. This indicates that the results of the Harris-Interactive poll cited in Chapter 1 are likely to be fairly accurate. Unfortunately, this also suggests that the anticipated stigma that many infected individuals contend with is likely to be well-founded. Thus, the social stigma of genital herpes is not limited to the realm of disparaging depictions in popular media (Roberts, 1997); it is likely to manifest behaviorally in the form of enacted stigmatization of infected individuals.

What is most surprising is the fact that participants responded almost equally as negatively toward oral herpes targets as they did toward genital herpes targets, suggesting that herpes is just plain repulsive, irrespective of whether it's on one's mouth or one's genitals. There may, however, be a compelling explanation for why oral herpes, like genital herpes, was such a "deal breaker" for so many respondents. First, because oral herpes has for several decades been exclusively referred to euphemistically as "cold sores," it may be the case that it has become

completely disassociated from the word “herpes.” I suspect that very few people are aware of the fact that cold sores and oral herpes are one and the same thing. Second, and conversely, the word “herpes,” whether it is used in isolation or in conjunction with the word “genital” or even with the word “oral,” has likely become entirely associated with genital herpes and, by extension, promiscuity, dirtiness, moral corruptness, and so forth.

In order to investigate this idea further, I first conducted an internet video search for “cold sore TV commercials” looking for any instances in which oral herpes was ever referred to as anything other than cold sores. Because the focus of the present study is only on U.S. attitudes (which is why participation in this study was limited to U.S. residents), I only considered domestic ads marketed to U.S. audiences. My search yielded several such cold sore medication TV ads (e.g., Abreva®, Ambesol®, Campho-Phenique®, Carmex®, Compeed®, Orajel™), and, as I suspected, none of these ads ever mention the word “herpes”—only “cold sores.” I then conducted a similar video search for “oral herpes TV commercials,” which yielded zero oral herpes or cold sore TV ads (instead, this search generated several Oral-B® toothbrush ads). Taken together, the results of these two searches lend support to the notion that cold sores and oral herpes have been disassociated in U.S. advertising. Next, I conducted an internet video search for “genital herpes TV commercials” in order to try to find any instances in which genital herpes was referred to as anything other than “genital herpes.” This search yielded one legitimate Valtrex® genital herpes TV ad (which, not surprisingly, refers to genital herpes as “genital herpes”) and numerous highly stigmatizing genital herpes parody commercials, including one produced by *Saturday Night Live (SNL)*, another produced by the comedy TV series, *Supernatural*, and several others appearing to be “homemade.” Finally, I conducted a video

search for “herpes TV commercials,” in order to see whether this search would generate more cold sore ads or more genital herpes ads. This final video search was not elucidating, since it yielded mostly TV ads for Holden Special Vehicles (HSV), an Australian-made high performance automobile line. In addition to these ads, there were a few parody TV commercials for genital herpes (the same ones found in the previous search), as well as a few legitimate Australian-made oral herpes TV ads (apparently oral herpes is referred to as “oral herpes” in Australian drug marketing campaigns).

The results of these searches support my contention that, while genital herpes is known as “genital herpes,” oral herpes is known as “cold sores,” at least in the U.S. Moreover, there is some evidence to suggest that “herpes”—whether the word is preceded by the word “genital” or not—may be essentially synonymous with “genital herpes.” Clearly, more research is needed.

A couple of final points on this: First, it is worth noting that the legitimate cold sore medication ads that I was able to find in the first video search included an Ambesol® ad that aired in 1980. This suggests to me that the euphemism, “cold sores,” has likely been used in lieu of “oral herpes” since the inception of such ads. This raises an interesting question about the results of the present study: If targets described as having oral herpes had instead been described as having cold sores, would this have made a difference in participants’ romantic and sexual behavior intentions, and, if so, how much of a difference? The second point that deserves some mention is the fact that oral herpes—even if it is not explicitly referred to as “herpes”—has not entirely escaped stigmatization in popular culture. One salient example can be found in the “mockumentary” comedy film, *This is Spinal Tap*, in which the lead singer of a rock band is shown throughout the film with oral herpes sores located on various (and ever-changing) parts of

his mouth. The implicit message seems to be that he acquired herpes as a result of his promiscuous “rock star lifestyle,” thus, making an association between oral herpes and promiscuity. This film was released in 1984, when herpes was still being heralded as a “new” and disgusting plague. As such, herpes was garnering a great deal of sensationalized media attention (Roberts, 1997). The point here is that oral herpes has not entirely escaped public ridicule, either.

The fact that participants were so unwilling to pursue relationships or have sex with targets said to have either oral herpes or genital herpes suggests that herpes stigma exacts a heavy toll on an infected individual’s overall mate value. This appears to be the case to a fairly large extent irrespective of whether or not an individual possesses good looks. Proponents of equity theory are not likely to be surprised by these findings. According to equity theory, we tend to seek out potential romantic partners who we perceive to be the “best deal.” That is to say, when we weigh all of our own assets and liabilities against those of others, we hope to attract a partner whose overall “mate value” matches favorably to our own (Hatfield, Rapson, & Aumer-Ryan, 2008; Hatfield, Walster, & Berscheid, 1978). Because herpes stigma is so salient in our culture, individuals who have contracted herpes are often perceived to possess a significant liability. This notion seems largely unwarranted in light of the medical facts surrounding herpes (e.g., herpes is extremely common, usually harmless, easily managed, etc.). Nevertheless, the stigma persists, not because it is bolstered by facts or because it is in any way merited, but rather because of ignorance, misinformation, and the influence of sensationalized media reports (Roberts, 2007). While several of the dimensions of social stigma outlined by Jones et al. (1984) are highly relevant here, the distinction they make between “real” and “imagined” peril seems

particularly relevant: the problem is not that herpes is perilous; the problem is that people *imagine* that herpes is perilous.

The chief aim of the present study was to investigate the extent to which enacted stigma is a legitimate concern for persons living with genital herpes. The results of this study suggest that it is, indeed, a significant social problem that merits attention. While it is valuable for researchers to continue exploring avenues aimed at reducing the transmission and proliferation of the herpes virus, it should also seem at least as valuable to explore avenues aimed at reducing the transmission and proliferation of the herpes stigma. And, if reducing herpes stigma also happens to increase disclosure and reduce transmission of the virus, all the better. If, however, it only serves to alleviate the pronounced psychosocial distress experienced by millions of infected persons, that should not seem like such a bad thing either.

Study Limitations

As is sometimes the case with sex research conducted through online surveys, there are questions as to whether these studies inspire *psychological realism*—the extent to which an experimental procedure triggers psychological processes that are similar to what participants would be expected to experience in a real-world situation (Aronson, Wilson, & Brewer, 1998; Brewer, 2000). A related, yet distinct, concept is that of *mundane realism*, which refers to the extent to which an experiment succeeds in approximating a real-life situation (Aronson & Carlsmith, 1968). I suspect that one limitation of the current study is that it lacks both psychological and mundane realism. Unfortunately, conducting research that truly succeeds in approximating such real life romantic and sexual encounters is fraught with practical and ethical obstacles. Even when studies can feasibly be conducted, there is often great difficulty getting

such studies approved by Internal Review Boards, which tend to err on the side of caution when it comes to taboo or “touchy” research topics (Ceci, Peters, & Plotkin, 1985; Council, Smith, Kaster-bundgaard, & Gladue, 1999).

Another concern with the present study is the fact that respondents self-selected to participate. Though participants were not made aware of the specific study topics (i.e., herpes, stigma) prior to participating, which was one of my concerns about the accuracy of the Harris-Interactive poll results, it was still necessary to post an “adult content” warning on the study advertisement along with the study title, *Sexual Behavior and Attitudes Study*. Consequently, participants who self-selected to participate in this study may have been fundamentally different from people who chose not to participate (Bethlehem & Biffignandi, 2011).

Suggestions for Future Research

Previous studies on genital herpes have largely focused on one of two main areas of inquiry: (1) understanding the impact of internalized and anticipated stigma on the psychosocial well-being of individual living with genital herpes and (2) investigating ways of reducing transmission of the herpes virus. While these are both valuable avenues of research, a greater focus on understanding enacted stigma of herpes and the social attitudes that result in such enacted stigma is needed. Although the current study reveals the extent to which having herpes severely diminishes one’s overall mate value or “stock” in the marketplace of love and sex, it also raises questions pertaining to the impetus and undergirding constituents of herpes stigma. The framework proposed by Jones et al. (1984) should seem a particularly helpful guide in further exploring the nature of herpes stigma. Specifically, it may be fruitful to parcel out the

variance in herpes stigma by manipulating factors related to origin, peril, and disruptiveness. It may also be informative to manipulate the amount and type of educational information given to respondents prior to measuring their attitudes and behavioral intentions toward infected targets. Finally, because the word “herpes” may carry a significant amount of stigma, it may be revealing to manipulate the name of the virus while holding constant all other virus characteristics.

Conclusions

The present work compared the stigma of oral and genital herpes and gauged the extent to which herpes impacts romantic and sexual behavior intentions. This study revealed that targets described as having oral or genital herpes were almost equally shunned, romantically and sexually. While genital herpes was found to be the more stigmatized virus of the two, oral herpes was viewed almost as harshly as its genital cousin. This may be due in part to the fact that oral herpes is rarely referred to as anything other than “cold sores.” Further research is recommended in order to gain a better understanding of herpes stigma and in order to find more effective ways of reducing herpes stigma.

REFERENCES

- Agocha, V. B., & Cooper, M. L. (1999). Risk perceptions and safer-sex intentions: Does a partner's physical attractiveness undermine the use of risk-relevant information? *Personality and Social Psychology Bulletin*, *25*, 746–759.
- Aronson, E., & Carlsmith, J. M. (1968). Experiments in social psychology. In G. Lindzey & E. Aronson (Eds.), *The handbook of social psychology* (Vol. 2, pp. 1-79). Reading, MA: Addison-Wesley.
- Aronson, E., Wilson, T. D., Brewer, M. B. (1998). Experimental methods. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (4th ed., Vol. 1, pp. 99-142). New York: McGraw-Hill.
- Aust, F., Diedenhofen, B., Ullrich, S., & Musch, J. (2013). Seriousness checks are useful to improve data validity in online research. *Behavior Research Methods*, *45*, 527–535. doi:10.3758/s13428-012-0265-2
- Balasubramaniam, R., Kuperstein, A. S., & Stoopler, E. T. (2014). Update on oral herpes virus infections. *Dental clinics of North America* *58* (2): 265–80. PMID 24655522.
- Baron, R. (2004). Post-herpetic neuralgia case study: optimizing pain control. *European Journal of Neurology*. 11 Supplement 1: 3–11. doi:10.1111/j.1471-0552.2004.00794.x. PMID 15061819.

- Berinsky, A., Huber, G., & Lenz, G. (2012). Evaluating online labor markets for experimental research: Amazon.com's Mechanical Turk. *Political Analysis*. Advance online publication. doi: 10.1093/pan/mpr057
- Berscheid, E., & Walster, E. (1974). Physical attractiveness. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (pp. 157–215). San Diego, CA: Academic Press.
- Bethlehem, J., & Biffignandi, S. (2011). The problem of self-selection. In *Wiley Handbooks in Survey Methodology* (pp. 303-327). Hoboken, NJ, USA: John Wiley & Sons.
- Bickford, J., Barton, S. E., & Mandalia, S. (2007). Chronic genital herpes and disclosure: The influence of stigma. *International Journal of STD & AIDS*, *18*, 589–592.
- Blanton, H., & Gerrard, M. (1997). Effect of sexual motivation on men's risk perception for sexually transmitted disease: There must be 50 ways to justify a lover. *Health Psychology*, *16*(4), 374-379.
- Brewer, M. (2000). Research Design and Issues of Validity. In Reis, H. and Judd, C. (Eds) *Handbook of Research Methods in Social and Personality Psychology*. Cambridge: Cambridge University Press.
- Brown, J. C., & Newcomb, W. W. (2011). Herpesvirus Capsid Assembly: Insights from structural analysis. *Current Opinion in Virology* *1* (2): 142–149.
doi:10.1016/j.coviro.2011.06.003. PMC 3171831. PMID 21927635.
- Bruce, A. (2004). Oral manifestations of sexually transmitted diseases. *Clinics in Dermatology*, (6), 520-527.

- Bruce, K., & Bullins, C. (1989). Students' attitudes and knowledge about genital herpes. *Journal of Sex Education and Therapy*, 15(4), 257-270.
- Bruce, K. E. M., & McLaughlin, J. (1986). The development of scales to assess knowledge and attitudes about genital herpes. *Journal of Sex Research*, 22(1), 73-84.
- Buhrmester, M., Kwang, T., & Gosling, S. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, 6(1), 3-5.
doi: 10.1177/1745691610393980
- Buss, D. M. (2003). *The evolution of desire: Strategies of human mating* (Rev. ed.). New York, NY: Basic Books.
- Buss, D. M., & Schmitt, D. P. (1993). Sexual Strategies Theory: An Evolutionary Perspective on Human Mating. *Psychological Review*, (2), 204-232.
- Carter, J., & Saunders, V. (2013). *Virology, Principles and Applications*. John Wiley & Sons. ISBN 978-0-470-02386-0.
- Casler, K., Bickel, L., & Hackett, E. (2013). Separate but equal? A comparison of participants and data gathered via Amazon's MTurk, social media, and face-to-face behavioral testing. *Computers in Human Behavior*, 29(6), 2156-2160.
- Ceci, S., Peters, D., & Plotkin, J. (1985). Human Subjects Review, Personal Values, and the Regulation of Social Science Research. *American Psychologist*, 40(9), 994-1002.

- Centers for Disease Control and Prevention. (2014). Epstein-Barr. Retrieved from <http://www.cdc.gov/epstein-barr/about-ebv.html>
- Centers for Disease Control and Prevention. (2010). Seroprevalence of Herpes Simplex Virus Type 2 Among Persons Aged 14–49 Years —United States, 2005–2008. *MMWR. Morbidity and Mortality Weekly Report*, 59(15), 456–459.
- Chaudoir, S. (2013). “Discredited” versus “discreditable”: Understanding how shared and unique stigma mechanisms affect psychological and physical health disparities. *Basic and Applied Social Psychology*, (1), 75-87.
- Chayavichitsilp P., Buckwalter, J. V., Krakowski, A. C., & Friedlander, S. F. (2009). Herpes simplex. *Pediatric Review* 30 (4): 119–29; quiz 130. doi:10.1542/pir.30-4-119. PMID 19339385.
- Corey, L., Wald, A., Patel, R., Sacks, S., Tyring, S., Warren, T., . . . Vargas-Cortes, M. (2004). Once-daily valacyclovir to reduce the risk of transmission of genital herpes. *The New England Journal of Medicine*, 350(1), 11-20.
- Council, J., Smith, E., Kaster-Bundgaard, J., & Gladue, B. (1999). *Interactions concerning risky research: Investigators rate their IRBs (and vice versa)*. American Psychological Association.
- Elder, G. H. (1969). Appearance and education in marriage mobility. *American Sociological Review: ASR; Official Journal of the American Sociological Association*, 34(4), 519-533.

- Fanfair, R., Zaidi, A., Taylor, L., Xu, F., Gottlieb, S.,...Markowitz, L. (2013). Trends in seroprevalence of herpes simplex virus type 2 among non-Hispanic blacks and non-Hispanic whites aged 14 to 49 years--United States, 1988 to 2010. *Sexually Transmitted Diseases*, 40(11), 860-4.
- Faul, F., Erdfelder, E., Lang, A., & Buchner, A. (2007). GPower 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39(2), 175-191.
- Fisher, M., & Cox, (2009). The influence of male facial attractiveness on women's receptivity. *Journal of Social, Evolutionary, and Cultural Psychology*, 3, 49-61.
- Fortenbury, J. (2014, July 28). The overblown stigma of genital herpes. *The Atlantic*, Retrieved from <http://www.theatlantic.com/health/archive/2014/07/the-overblown-stigma-of-genital-herpes/374757/>
- Foster, L., & Byers, E. (2013). Stigmatization of individuals with sexually transmitted infections: Effects of illness and observer characteristics. *Journal of Applied Social Psychology*, 43, E141-E152.
- Gangestad, S. W., & Simpson, J. A. (2000). The evolution of human mating: Trade-offs and strategic pluralism. *Behavioral and Brain Sciences*, 23, 573-587. DOI: <http://dx.doi.org/>
- Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity*. New York, NY: Simon and Schuster.

- Gosling, S., Vazire, S., Srivastava, S., & John, O. (2004). Should we trust web-based studies? A comparative analysis of six preconceptions about Internet questionnaires. *American Psychologist, 59*, 93-104.
- Guidelines for the management of herpes simplex virus in pregnancy. (2009). *International Journal of Gynecology and Obstetrics, 104*(2), 167-171.
- Gupta, R., Warren, T., & Wald, A. (2007). Genital herpes. *The Lancet, 370*(9605), 2127.
- Harris Interactive. (2007) State of genital herpes 2007: Personal story and societal stigma. <http://harris-interactive.com/>
- Hatfield, E., Rapson, R. L., & Aumer-Ryan, K. (2008). Social justice in love relationships: Recent developments. *Social Justice Research, 21*, 413-431. New York: Springer.
- Hatfield, E., Walster, G. W., & Berscheid, E. (1978). *Equity: Theory and research*. Boston: Allyn and Bacon.
- Hennessy, M., Fishbein, M., Curtis, B., & Barrett, D. (2007). Evaluating the risk and attractiveness of romantic partners when confronted with contradictory cues. *AIDS and Behavior, 11*(3), 479-490.
- Hood, J., & Friedman, A. (2011). Unveiling the hidden epidemic: A review of stigma associated with sexually transmissible infections. *Sexual Health, 8*(2), 159-170.
- Jadack, R. A., Keller, M. L., & Hyde, J. S. (1990). Genital herpes: Gender comparisons and the disease experience. *Psychology of Women Quarterly, 14*(3), 419.

- Jones, E., Farina, A., Hastorf, A., Markus, H., Miller, D., & Scott, R. (1984), *Social stigma: The psychology of marked relationships*. New York: Freeman, ISBN 978-0716715924
- Kenrick, D. T., Groth, G. E., Trost, M. R., & Sadalla, E. K. (1993). Integrating evolutionary and social exchange perspectives on relationship: Effects of gender, self-appraisal, and involvement level on mate selection criteria. *Journal of Personality and Social Psychology*, 64, 951–969.
- Kimberlin, D., & Rouse, D. (2004). Clinical practice. Genital herpes. *The New England Journal of Medicine*, 350(19), 1970-7.
- Kittur, A., Chi, E., & Suh, B. (2008). Crowdsourcing user studies with Mechanical Turk. *Proceedings of the Twenty-Sixth Annual SIGCHI Conference on Human Factors in Computing Systems* (SIGCHI '08). New York: Association for Computing Machinery (ACM). doi: 10.1145/1357054.1357127
- Koelle, D., & Wald, A. (2000). Herpes simplex virus: The importance of asymptomatic shedding. *Journal of Antimicrobial Chemotherapy*, 45(4), 1-8.
- Kruse, M., & Fromme, K. (2005) Influence of physical attractiveness and alcohol on men's perceptions of potential sexual partners and sexual behavior intentions. *Experimental and Clinical Psychopharmacology*, 13(2), 146-156.
- Lennon, C., & Kenny, D. (2013). The role of men's physical attractiveness in women's perceptions of sexual risk: Danger or allure? *Journal of Health Psychology*, 18(9), 1166-1176.

- Lewis, L., Rosenthal, S., Succop, P., Stanberry, L., & Bernstein, D. (1999). College students' knowledge and perceptions of genital herpes. *International Journal of STD & AIDS*, *10*(11), 703-8.
- Li, N., & Kenrick, D. (2006). Sex similarities and differences in preferences for short-term mates: What, whether, and why. *Journal of Personality and Social Psychology*, (3), 468-489.
- Mason, W., & Suri, S. (2012). Conducting behavioral research on Amazon's Mechanical Turk. *Behavior Research Methods*, *44*(1), 1-23.
- Mindel, A., & Marks, C. (2005). Psychological symptoms associated with genital herpes virus infections. *CNS Drugs*, *19*(4), 303-312.
- Mirotnik, J. (1991). Genital herpes: A survey of the attitudes, knowledge, and reported behaviors of college students at-risk for infection. *Journal of Psychology & Human Sexuality*, *4*(1), 73-99.
- Newton, D., & McCabe, M. (2008). Effects of sexually transmitted infection status, relationship status, and disclosure status on sexual self-concept. *Journal of Sex Research*, *45*(2), 187-192.
- Oppenheimer, D. M., Meyvis, T., & Davidenko, N. (2009). Instructional manipulation checks: Detecting satisficing to increase statistical power. *Journal of Experimental Social Psychology*, *45*, 867–872.

- Pachankis, J. E. (2007). The psychological implications of concealing a stigma: A cognitive–affective–behavioral model. *Psychological Bulletin*, *133*(2), 328-345. <http://dx.doi.org.eres.library.manoa.hawaii.edu/10.1037/0033-2909.133.2.328>
- Paolacci, G., Chandler, J., & Ipeirotis, P. (2010). Running experiments on Mechanical Turk. *Judgment and Decision Making*, *5*(5), 411-419.
- Patel, R. (1997). Valacyclovir for the suppression of recurrent genital HSV infection: A placebo controlled study of once daily therapy. International Valacyclovir HSV Study Group. *Genitourinary Medicine*, *(2)*, 105.
- Peer, E., Vosgerau, J., & Acquisti, A. (2014). Reputation as a sufficient condition for data quality on Amazon Mechanical Turk. *Behavior Research Methods*, *46*(4), 1023-1031.
- Posner, T. (2000). The 'Herpes' Phenomenon: Media Myths, Meanings, and Medicines. *Science as Culture*, *9*(4), 445-467.
- Qualtrics software, Version 9340538. Copyright © 2015 Qualtrics. Qualtrics and all other Qualtrics product or service names are registered trademarks or trademarks of Qualtrics, Provo, UT, USA. <http://www.qualtrics.com>.
- Quinn, D., Chaudoir, S., & Simpson, J. (2009). Living with a concealable stigmatized identity: The impact of anticipated stigma, centrality, salience, and cultural stigma on psychological distress and health. *Journal of Personality and Social Psychology*, *97*(4), 634-651.

- Roberts, R. (1997). Power/knowledge and discredited identities. *Sociological Quarterly*, 38(2), 265-284.
- Ross, J., Irani, L., Silberman, M., Zaldivar, A., & Tomlinson, B. (2010). Who are the crowdworkers? Shifting demographics in Amazon Mechanical Turk. *Proceedings of the 28th International Conference Extended Abstracts of Human Factors in Computing Systems [CHI EA '10]* (p. 2863-2872). New York: Association for Computing Machinery (ACM). doi: 10.1145/1753846.1753873
- Sample, J., Young, L., Martin, B., Chatman, T., Kieff, E., Rickinson, A., & Kieff, E. (1990). Epstein-Barr virus types 1 and 2 differ in their EBNA-3A, EBNA-3B, and EBNA-3C genes. *The Journal of Virology*, 64(9), 4084.
- Schillinger, J. A., McKinney, C. M., Garg, R., Gwynn, R. C., White, K., Lee...Frieden, T. (2008) Seroprevalence of herpes simplex virus type 2 and characteristics associated with undiagnosed infection: New York City, 2004. *Sexually Transmitted Diseases*. 35(6): 599–606.
- Sloan, L. (2008, May 14) *Why Herpes Isn't as Bad as You May Think (and a Lot More Common)*
Retrieved from <http://www.health.com/health/condition-article/0,,20189608,00.html>
- Swanson, J., Dibble, S., & Chenitz, W. (1995). Clinical features and psychosocial factors in young adults with genital herpes. *Image: The Journal of Nursing Scholarship*, 27(1), 16-22.
- Symons, D. (1979). *The evolution of human sexuality*. New York: Oxford University Press.

- Trivers, R. L. (1972). Parental investment and sexual selection. In B. Campbell (Ed.), *Sexual selection and the descent of man, 1871-1971* (pp. 136-179). Chicago, IL: Aldine.
- Wald, A. (2006). Genital HSV-1 infections, *Sexually Transmitted Infections*, 82(3): 189–190.
- Wald, A., & Corey, L. (2007). Chapter 36: Persistence in the population: epidemiology, transmission. *Human Herpesviruses: Biology, Therapy, and Immunoprophylaxis*. Cambridge University Press. ISBN 978-0-521-82714-0.
- Weiner, B., Perry, R. P., & Magnusson, J. (1988). An attributional analysis of reactions to stigmas. *Journal of Personality and Social Psychology*, 55(5), 738-748.
- Xu, F., Sternberg, M. R., Kottiri, B. J., Mcquillan, G. M., Lee, F. K., Nahmias, A. J., ...Markowitz, L. E. (2006). Trends in herpes simplex virus type 1 and type 2 seroprevalence in the United States. (Clinical report). *JAMA, The Journal of the American Medical Association*, (8), 964.

Table 1.

Comparison of Target PA Ratings: Current Study and Pilot Study

Targets	N	Mean	Std. Deviation
Attractive Female (Current Study)	122	6.37	.730
Average Female (Current Study)	129	3.98	1.192
Attractive Male (Current Study)	94	5.96	1.200
Average Male (Current Study)	94	4.37	1.218
Attractive Female (Pilot Study)	64	6.06	.833
Average Female (Pilot Study)	64	3.69	1.344
Attractive Male (Pilot Study)	64	6.02	1.061
Average Male (Pilot Study)	64	3.77	1.342

Table 2

Logistic Regression: Romantic Behavior Intentions According to Herpes Status

<u>Predictor</u>	<u>B</u>	<u>SE</u>	<u>Wald χ^2</u>	<u>df</u>	<u>p</u>	<u>OR</u>	<u>95% CI for OR</u>	
							<u>Lower</u>	<u>Upper</u>
Genital Herpes	-1.215	.429	8.023	1	.005	.297	.128	.688
Oral Herpes	-1.852	.446	17.255	1	.000	.157	.065	.376
Female	.610	.506	1.453	1	.228	1.840	.683	4.958
Target: Attractive	1.750	.575	9.248	1	.002	5.753	1.863	17.768
Genital Herpes*Female	-.439	.607	.522	1	.470	.645	.196	2.119
Oral Herpes*Female	.113	.611	.034	1	.853	1.120	.338	3.712
Genital Herpes*Target: Attractive	-.984	.628	2.455	1	.117	.374	.109	1.280
Oral Herpes*Target: Attractive	.245	.634	.149	1	.699	1.277	.369	4.422
Female*Target: Attractive	-1.608	.465	11.939	1	.001	.200	.080	.499
<u>Constant</u>	<u>1.207</u>	<u>.331</u>	<u>13.326</u>	<u>1</u>	<u>.000</u>	<u>3.342</u>		

Note. $\chi^2(9) = 81.414, p < .001$; Nagelkerke $R^2 = .235$; Percentage Predicted Correctly = 70.6%.

Table 3

Logistic Regression: Sexual Behavior Intentions According to Herpes Status

<u>Predictor</u>	<u>B</u>	<u>SE</u>	<u>Wald χ^2</u>	<u>df</u>	<u>p</u>	<u>OR</u>	<u>95% CI for OR</u>	
							<u>Lower</u>	<u>Upper</u>
Genital Herpes	-1.478	.416	12.601	1	.000	.228	.101	.516
Oral Herpes	-1.786	.435	16.901	1	.000	.168	.071	.393
Female	-.380	.409	.866	1	.352	.684	.307	1.523
Target: Attractive	2.105	.516	16.635	1	.000	8.204	2.984	22.557
Genital Herpes*Female	.354	.558	.403	1	.526	1.425	.477	4.251
Oral Herpes*Female	.926	.546	2.872	1	.090	2.525	.865	7.368
Genital Herpes*Target: Attractive	-1.393	.576	5.844	1	.016	.248	.080	.768
Oral Herpes*Target: Attractive	-.563	.560	1.010	1	.315	.570	.190	1.707
Female*Target: Attractive	-1.156	.456	6.441	1	.011	.315	.129	.768
Constant	.708	.296	5.731	1	.017	2.031		

Note. $\chi^2(9) = 92.466, p < .001$; Nagelkerke $R^2 = .253$; Percentage Predicted Correctly = 68.8%.



Figure 1. Attractive Female Target



Figure 2. Average Female Target



Figure 3. Attractive Male Target



Figure 4. Average Male Target



Your Account HITS Qualifications

Introduction | Dashboard | Status | Account Settings

Mechanical Turk is a marketplace for work.

We give businesses and developers access to an on-demand, scalable workforce. Workers select from thousands of tasks and work whenever it's convenient.

277,818 HITS available. [View them now.](#)

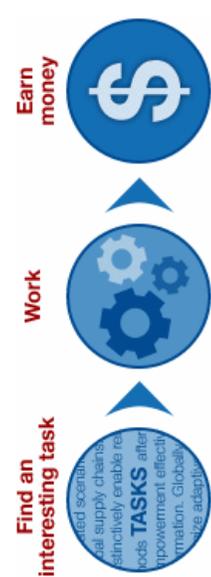
Make Money by working on HITS

HITS - *Human Intelligence Tasks* - are individual tasks that you work on. [Find HITS now.](#)

As a Mechanical Turk Worker you:

- Can work from home
- Choose your own work hours
- Get paid for doing good work

Find an interesting task



[Find HITS Now](#)

Get Results from Mechanical Turk Workers

Ask workers to complete HITS - *Human Intelligence Tasks* - and get results using Mechanical Turk. [Get Started.](#)

As a Mechanical Turk Requester you:

- Have access to a global, on-demand, 24 x 7 workforce
- Get thousands of HITS completed in minutes
- Pay only when you're satisfied with the results

Fund your account



[Get Started](#)

or [learn more about being a Worker](#)

APPENDIX B - DEMOGRAPHIC SURVEY

Please answer the following questions:

What is your age?

18-75 or above (a drop down box provides age options)

What is your gender?

- Male
- Female
- Other

What is your sexual orientation?

- Heterosexual
- Homosexual
- Bisexual

How would you classify yourself?

- African American
- American Indian
- Asian American
- Caucasian
- Indian/Pakistani
- Hispanic
- Latino
- Middle Eastern
- Multiracial
- Pacific Islander
- Other

What is your current relationship/marital status?

- Divorced
- Living with another
- Married
- Separated

- Single
- Widowed
- Other

What is the highest level of education you have completed?

- Doctorate/Post doc
- Professional degree (J.D., etc.)
- Master's degree
- Bachelor's degree
- Associate degree
- Trade/technical/vocational training
- High school or equivalent
- Grammar school

What is your current household income?

- Under \$10,000
- \$10,000 - \$19,999
- \$20,000 - \$29,999
- \$30,000 - \$39,999
- \$40,000 - \$49,999
- \$50,000 - \$74,999
- \$75,000 - \$99,999
- \$100,000 - \$150,000
- Over \$150,000
- I would rather not say

How would you classify yourself politically?

- Democrat
- Republican
- Green
- Independent
- Libertarian
- Other

Which of these best describes your religious beliefs?

- Agnostic

- Atheist
- Buddhist
- Catholic
- Christian
- Hindu
- Jewish
- Mormon
- Muslim
- Not religious
- Spiritual but not religious
- Other

How important are your religious beliefs to you?

- Very important
- Important
- Somewhat important
- Neither important nor unimportant
- Somewhat unimportant
- Unimportant
- Totally unimportant

Which of the following best describes you?

- Very conservative
- Conservative
- Somewhat conservative
- Middle of the road
- Somewhat liberal
- Liberal
- Very liberal

APPENDIX C - ROMANTIC/SEXUAL BEHAVIOR SURVEY (RSBS)

Again, supposing that you are single, and based on everything you have just read about him⁷, please answer the following questions:

Hypothetically speaking, which of the following relationship types do you think you would be willing to have with him? (Please choose all that apply)⁸

- Friendship
- One-time date
- Date casually
- Date regularly
- Committed relationship
- Marriage/Life partnership
- Fling/One-night stand
- None of the above

Which of the following would you be willing to do with him on a *one-time date*? (Select all that apply)

- Kiss him on the lips
- Let him perform *protected* oral sex on you (e.g., use a dental dam)
- Let him perform *unprotected* oral sex on you
- Perform *protected* oral sex on him (e.g., use a condom)
- Perform *unprotected* oral sex on him.
- Have *protected* sexual intercourse with him (e.g., use male/female condom)
- Have *unprotected* sexual intercourse with him
- ALL of the above
- None of the above

⁷ This version of the survey was worded using the personal pronoun “him” and accompanied the male target images. Another version of this survey was worded using the personal pronoun “her” and accompanied the female target images. Additionally, the types of contraception (e.g., condoms, dental dams) were different in the version designed to accompany female targets.

⁸ Participants who chose either “Friendship” or “None of the above” were not presented with the remainder of the RSWS. Instead, they were directly routed to the Herpes Attitudes Scale (HAS). Participants who chose any of the other options answered questions for *only* the relationship types they selected.

Which of the following would you be willing to do with him if you were dating him *casually*? (Select all that apply)

- Kiss him on the lips
- Let him perform *protected* oral sex on you (e.g., use dental dam)
- Let him perform *unprotected* oral sex on you
- Perform *protected* oral sex on him (e.g., use a condom)
- Perform *unprotected* oral sex on him.
- Have *protected* sexual intercourse with him (e.g., use male/female condom)
- Have *unprotected* sexual intercourse with him
- ALL of the above
- None of the above

Which of the following would you be willing to do with him if you were dating him *regularly*? (Select all that apply)

- Kiss him on the lips
- Let him perform *protected* oral sex on you (e.g., use dental dam)
- Let him perform *unprotected* oral sex on you
- Perform *protected* oral sex on him (e.g., use a condom)
- Perform *unprotected* oral sex on him.
- Have *protected* sexual intercourse with him (e.g., use male/female condom)
- Have *unprotected* sexual intercourse with him
- ALL of the above
- None of the above

Which of the following would you be willing to do with him if you were in a *committed relationship* with him? (Select all that apply)

- Kiss him on the lips
- Let him perform *protected* oral sex on you (e.g., use dental dam)
- Let him perform *unprotected* oral sex on you
- Perform *protected* oral sex on him (e.g., use a condom)
- Perform *unprotected* oral sex on him.
- Have *protected* sexual intercourse with him (e.g., use male/female condom)
- Have *unprotected* sexual intercourse with him
- ALL of the above
- None of the above

Which of the following would you be willing to do with him if he were your *spouse/life partner*? (Select all that apply)

- Let him perform *protected* oral sex on you (e.g., use dental dam)
- Let him perform *unprotected* oral sex on you
- Perform *protected* oral sex on him (e.g., use a condom)
- Perform *unprotected* oral sex on him.
- Have *protected* sexual intercourse with him (e.g., use male/female condom)
- Have *unprotected* sexual intercourse with him
- ALL of the above

Which of the following would you be willing to do with him during a *fling/one-night stand*? (Select all that apply)

- Kiss him on the lips
- Let him perform *protected* oral sex on you (e.g., use dental dam)
- Let him perform *unprotected* oral sex on you
- Perform *protected* oral sex on him (e.g., use a condom)
- Perform *unprotected* oral sex on him.
- Have *protected* sexual intercourse with him (e.g., use male/female condom)
- Have *unprotected* sexual intercourse with him
- ALL of the above

APPENDIX D - HERPES ATTITUDES SCALE (HAS): “GENITAL HERPES”⁹

Instructions: For each of the following 40 statements, please choose whether you agree or disagree with the statement:

- Strongly agree with the statement
- Agree with the statement
- Somewhat agree with the statement
- Neither agree nor disagree with the statement
- Somewhat disagree with the statement
- Disagree with the statement
- Strongly disagree with the statement

1. The thought of genital herpes is disgusting.
2. I would not feel dirty if I got genital herpes.
3. Genital herpes is not as scary as most people believe.
4. There are a lot of infections that are worse than genital herpes.
5. People give genital herpes to others for revenge.
6. I could cope with having genital herpes.
7. If I had a roommate with genital herpes, I would move out.
8. Only bad people catch genital herpes.
9. I feel comfortable around friends who have genital herpes.
10. You can tell that someone has genital herpes just by looking at them.
11. I am pretty sure that I could handle having genital herpes if I caught it.
12. Having genital herpes is really no worse than having cold sores.
13. People who have genital herpes are looked down on.
14. I do not like to use public restrooms because I might catch genital herpes there.
15. I could remain calm if I found out that I had gotten genital herpes.
16. A person who has genital herpes got what s/he deserves.
17. If I had genital herpes, I would tell a potential partner.
18. There is more to a person who has genital herpes than the fact that s/he has genital herpes.
19. I would not avoid a friend if I found out that s/he had genital herpes.
20. I would consider marrying someone who has genital herpes.
21. People who have genital herpes should be treated the same as anyone else.
22. I would feel self-conscious if I got genital herpes.
23. If I found out that my sexual partner had genital herpes, I would never speak to him/her again.
24. The “new sexual leprosy” is an inappropriate term for genital herpes.

⁹ An Attention Check Question (ACQ) was included in this survey (“I once suffered a fatal heart attack while watching TV”) in order to identify participants who were not paying attention while answering questions.

25. Catching genital herpes would not be the worst thing that could happen to me.
26. I would not be ashamed if I got genital herpes.
27. People who have genital herpes are worth getting to know.
28. Genital herpes is a manageable infection.
29. I think that people who have genital herpes are too sexually active.
30. If I caught genital herpes, I would consider suicide.
31. People who have genital herpes should never have sex again.
32. I would be embarrassed to tell anyone if I had genital herpes.
33. Only unclean people catch genital herpes.
34. If I got genital herpes, no one would want to marry me.
35. If I got genital herpes, I would not want to have children.
36. Everyone would know if I got genital herpes.
37. People who have genital herpes are promiscuous.
38. I could discuss genital herpes with my parents.
39. If I asked a friend a question about genital herpes s/he would think that I had genital herpes.
40. I would date a person known to have genital herpes.

Note: Items 1, 5, 7, 8, 10, 13, 14, 16, 22, 23, 29, 30, 31, 32, 33, 34, 35, 36, 37, and 39 are scored negatively. Items 2, 3, 4, 6, 9, 11, 12, 15, 17, 18, 19, 20, 21, 24, 25, 26, 27, 28, 38, and 40 are scored positively. Higher means indicate more favorable/positive attitudes about herpes.

APPENDIX E - HERPES ATTITUDES SCALE (HAS): “ORAL HERPES”¹⁰

Instructions: For each of the following 40 statements, please choose whether you agree or disagree with the statement:

- Strongly agree with the statement
- Agree with the statement
- Somewhat agree with the statement
- Neither agree nor disagree with the statement
- Somewhat disagree with the statement
- Disagree with the statement
- Strongly disagree with the statement

1. The thought of oral herpes is disgusting.
2. I would not feel dirty if I got oral herpes.
3. Oral herpes is not as scary as most people believe.
4. There are a lot of infections that are worse than oral herpes.
5. People give oral herpes to others for revenge.
6. I could cope with having oral herpes.
7. If I had a roommate with oral herpes, I would move out.
8. Only bad people catch oral herpes.
9. I feel comfortable around friends who have oral herpes.
10. You can tell that someone has oral herpes just by looking at them.
11. I am pretty sure that I could handle having oral herpes if I caught it.
12. Having oral herpes is really no worse than having cold sores.
13. People who have oral herpes are looked down on.
14. I do not like to use public restrooms because I might catch oral herpes there.
15. I could remain calm if I found out that I had gotten oral herpes.
16. A person who has oral herpes got what s/he deserves.
17. If I had oral herpes, I would tell a potential partner.
18. There is more to a person who has oral herpes than the fact that s/he has oral herpes.
19. I would not avoid a friend if I found out that s/he had oral herpes.
20. I would consider marrying someone who has oral herpes.
21. People who have oral herpes should be treated the same as anyone else.
22. I would feel self-conscious if I got oral herpes.
23. If I found out that my sexual partner had oral herpes, I would never speak to him/her again.
24. The “new sexual leprosy” is an inappropriate term for oral herpes.
25. Catching oral herpes would not be the worst thing that could happen to me.

¹⁰ An Attention Check Question (ACQ) was included in this survey (“I once suffered a fatal heart attack while watching TV”) in order to identify participants who were not paying attention while answering questions.

26. I would not be ashamed if I got oral herpes.
27. People who have oral herpes are worth getting to know.
28. Oral herpes is a manageable infection.
29. I think that people who have oral herpes are too sexually active.
30. If I caught oral herpes, I would consider suicide.
31. People who have oral herpes should never have sex again.
32. I would be embarrassed to tell anyone if I had oral herpes.
33. Only unclean people catch oral herpes.
34. If I got oral herpes, no one would want to marry me.
35. If I got oral herpes, I would not want to have children.
36. Everyone would know if I got oral herpes.
37. People who have oral herpes are promiscuous.
38. I could discuss oral herpes with my parents.
39. If I asked a friend a question about oral herpes s/he would think that I had oral herpes.
40. I would date a person known to have oral herpes.

Note: Items 1, 5, 7, 8, 10, 13, 14, 16, 22, 23, 29, 30, 31, 32, 33, 34, 35, 36, 37, and 39 are scored negatively. Items 2, 3, 4, 6, 9, 11, 12, 15, 17, 18, 19, 20, 21, 24, 25, 26, 27, 28, 38, and 40 are scored positively. Higher means indicate more favorable/positive attitudes about herpes.

APPENDIX F – FEMALE "ORAL HERPES" VIGNETTE

Suppose for a moment that you are single, and the woman pictured above possesses the qualities that you find desirable in a romantic/sexual partner (e.g., solid career, good sense of humor, shared religious/spiritual beliefs, common interests and values, intelligence, honesty, faithfulness, etc.). In short, you really "click" with her. Further suppose that she finds you very interesting and attractive and is eager to pursue whatever type of romantic or sexual connection that you would like to pursue with her.

Let's also suppose that she has been diagnosed with oral herpes. If you are not familiar with oral herpes, it is a very common, contagious virus. Approximately 80-90% of those who acquire oral herpes experience either no symptom at all or symptoms so mild that they go completely undetected. Therefore, most people do not know they have the virus.

For those people who do experience symptoms, oral herpes typically manifests as an outbreak of small blisters on or around the mouth which can be irritating. Oral herpes outbreaks tend to diminish in severity and frequency over time until most people are asymptomatic (show no symptoms), but the virus still remains dormant (inactive) in the body. In its typical manifestation, oral herpes is not considered dangerous. There is currently no known cure for oral herpes.

APPENDIX G – FEMALE “GENITAL HERPES” VIGNETTE

Suppose for a moment that you are single, and the woman pictured above possesses the qualities that you find desirable in a romantic/sexual partner (e.g., solid career, good sense of humor, shared religious/spiritual beliefs, common interests and values, intelligence, honesty, faithfulness, etc.). In short, you really “click” with her. Further suppose that she finds you very interesting and attractive and is eager to pursue whatever type of romantic or sexual connection that you would like to pursue with her.

Let’s also suppose that she has been diagnosed with genital herpes. If you are not familiar with genital herpes, it is a very common, contagious virus. Approximately 80-90% of those who acquire genital herpes experience either no symptom at all or symptoms so mild that they go completely undetected. Therefore, most people do not know they have the virus.

For those people who do experience symptoms, genital herpes typically manifests as an outbreak of small blisters on or around the genitals which can be irritating. Genital herpes outbreaks tend to diminish in severity and frequency over time until most people are asymptomatic (show no symptoms), but the virus still remains dormant (inactive) in the body. In its typical manifestation, genital herpes is not considered dangerous. There is currently no known cure for genital herpes.

APPENDIX H – FEMALE “NO HERPES” VIGNETTE

Suppose for a moment that you are single, and the woman pictured above possesses the qualities that you find desirable in a romantic/sexual partner (e.g., solid career, good sense of humor, shared religious/spiritual beliefs, common interests and values, intelligence, honesty, faithfulness, etc.). In short, you really “click” with her. Further suppose she finds you very interesting and attractive and is eager to pursue whatever type of romantic or sexual connection that you would like to pursue with her.

APPENDIX I – MALE "ORAL HERPES" VIGNETTE

Suppose for a moment that you are single, and the man pictured above possesses the qualities that you find desirable in a romantic/sexual partner (e.g., solid career, good sense of humor, shared religious/spiritual beliefs, common interests and values, intelligence, honesty, faithfulness, etc.). In short, you really "click" with him. Further suppose he finds you very interesting and attractive and is eager to pursue whatever type of romantic or sexual connection that you would like to pursue with him.

Let's also suppose that he has been diagnosed with oral herpes. If you are not familiar with oral herpes, it is a very common, contagious virus. Approximately 80-90% of those who acquire oral herpes experience either no symptom at all or symptoms so mild that they go completely undetected. Therefore, most people do not know they have the virus.

For those people who do experience symptoms, oral herpes typically manifests as an outbreak of small blisters on or around the mouth which can be irritating. Oral herpes outbreaks tend to diminish in severity and frequency over time until most people are asymptomatic (show no symptoms), but the virus still remains dormant (inactive) in the body. In its typical manifestation, oral herpes is not considered dangerous. There is currently no known cure for oral herpes.

APPENDIX J – MALE “GENITAL HERPES” VIGNETTE

Suppose for a moment that you are single, and the man pictured above possesses the qualities that you find desirable in a romantic/sexual partner (e.g., solid career, good sense of humor, shared religious/spiritual beliefs, common interests and values, intelligence, honesty, faithfulness, etc.). In short, you really “click” with him. Further suppose that he finds you very interesting and attractive and is eager to pursue whatever type of romantic or sexual connection that you would like to pursue with him.

Let’s also suppose that he has been diagnosed with genital herpes. If you are not familiar with genital herpes, it is a very common, contagious virus. Approximately 80-90% of those who acquire genital herpes experience either no symptom at all or symptoms so mild that they go completely undetected. Therefore, most people do not know they have the virus.

For those people who do experience symptoms, genital herpes typically manifests as an outbreak of small blisters on or around the genitals which can be irritating. Genital herpes outbreaks tend to diminish in severity and frequency over time until most people are asymptomatic (show no symptoms), but the virus still remains dormant (inactive) in the body. In its typical manifestation, genital herpes is not considered dangerous. There is currently no known cure for genital herpes.

APPENDIX K – MALE “NO HERPES” VIGNETTE

Suppose for a moment that you are single, and the man pictured above possesses the qualities that you find desirable in a romantic/sexual partner (e.g., solid career, good sense of humor, shared religious/spiritual beliefs, common interests and values, intelligence, honesty, faithfulness, etc.). In short, you really “click” with him. Further suppose he finds you very interesting and attractive and is eager to pursue whatever type of romantic or sexual connection that you would like to pursue with him.

APPENDIX L - EXAMPLES OF MTURK ADVERTISEMENTS

amazonmechanicalturk Artificial Intelligence

Find HITs containing adult content

277,838 HITs available now

Your Account | HITs Available To You | HITs Assigned To You | Qualifications

for which you are qualified

that pay at least \$ 0.30 require Master Qualification

GO

1-5 of 5 Results

HITS Available (most first)

Show all details | Hide all details

HITS containing 'adult content' that pay at least \$0.30

Videoclip Survey 2 (male;18-40 years required) (WARNING: This HIT may contain adult content. Worker discretion is advised)

Requester: Research Social Psychology

HIT Expiration Date: Oct 18, 2015 (2 days 11 hours)

Time Allotted: 10 minutes

Reward: \$0.35

View a HIT in this group

Videoclip Survey 6 (male;18-40 years required) (WARNING: This HIT may contain adult content. Worker discretion is advised)

Requester: Research Social Psychology

HIT Expiration Date: Oct 18, 2015 (2 days 10 hours)

Time Allotted: 10 minutes

Reward: \$0.35

View a HIT in this group

Videoclip Survey 5 (male;18-40 years required) (WARNING: This HIT may contain adult content. Worker discretion is advised)

Requester: Research Social Psychology

HIT Expiration Date: Oct 18, 2015 (2 days 10 hours)

Time Allotted: 10 minutes

Reward: \$0.35

View a HIT in this group

Videoclip Survey 4 (male;18-40 years required) (WARNING: This HIT may contain adult content. Worker discretion is advised)

Requester: Research Social Psychology

HIT Expiration Date: Oct 18, 2015 (2 days 10 hours)

Time Allotted: 10 minutes

Reward: \$0.35

View a HIT in this group

Videoclip Survey 3 (male;18-40 years required) (WARNING: This HIT may contain adult content. Worker discretion is advised)

Requester: Research Social Psychology

HIT Expiration Date: Oct 18, 2015 (2 days 10 hours)

Time Allotted: 10 minutes

Reward: \$0.35

View a HIT in this group

APPENDIX M - MTURK SURVEY LINK/CONSENT FORM

Consent to Participate in Research

Project Description: This academic survey is titled "Sexual Behavior and Attitudes." This survey covers topics of a sexual nature. For instance, you will be asked to imagine being in various hypothetical romantic/sexual relationships; you will be asked to speculate about what types of sexual activity you would be willing to do in these hypothetical relationships; and you may or may not be asked questions about your own sexual history and STI status. **If you are at least 18 years old and are comfortable answering questions of this nature, I would like to invite you to participate in this research project.**

What you will be asked to do: You will be asked to take a short demographic survey, view a photo of an individual, rate the individual's appearance, rate your own appearance, read a short description of the individual in the photo, and then take a series of questionnaires. Many of the questions that you will be asked pertain to things of a sexual nature.

Participation in this study typically takes approximately 15-30 minutes.

Benefits and Risks: There is little risk to you in participating in this project; however, if you find questions about sexual activity and sexually transmitted infections disturbing, the material presented in this study could evoke some anxiety. It is hoped that this study will contribute to psychology's understanding of sexual behavior and attitudes.

Confidentiality and Privacy: This survey is anonymous. You will not be asked for any personally identifying information during the course of participating in this survey. Please do not include any personally identifying information, such as your name, in your survey responses. Your survey responses will be encrypted in a password protected computer.

Voluntary Participation: Participation in this research project is voluntary. There is no penalty for not participating. If you choose to participate, you may quit at any time.

Questions: If you have any questions or concerns regarding this research project, feel free to contact me. My name is Paul Thornton, and I am a PhD student at the University of Hawaii. This survey is part of my research toward a doctoral degree. You can contact me at pd@hawaii.edu. You can also contact my faculty advisor, Dr. Elaine Hatfield, at (808) 956-6276. If you have any questions regarding your rights as a research participant, please contact the UH Human Studies Program at (808) 956-5007 or at uhirb@hawaii.edu.

If you do not want to participate in this study, exit this page, and do NOT click on the survey link.

If you want to participate in this study, click the survey link below. At the end of the survey, you will receive a code indicating that you have participated in this study. Please enter the code into this survey link page. Compensation will be provided via Mechanical Turk, where the exact amount of compensation is indicated for this Human Intelligence Task (HIT).

IMPORTANT: Make sure to leave this window open as you take the survey. When you finish the survey, you will be given a survey code to enter below. If you would like to print a copy of this consent form, please select the "Print This Page" button below.

[Print This Page](#)

ACKNOWLEDGMENT: By clicking the survey link below, you are indicating that you are at least 18 years old and want to participate in this research project.

Survey link:

https://imanoahawaiiiss.az1.qualtrics.com/SE/?SID=SV_4N69BKXqsVBDA9

Enter the survey code here: Select the "SUBMIT" button below AFTER you take the survey and enter the survey code.

e.g. 123456

[Submit](#)

APPENDIX N - SURVEY INSTRUCTIONS



COLLEGE of SOCIAL SCIENCES

UNIVERSITY of HAWAII[®] at MĀNOA

Thank you for participating in this study. Please follow these simple instructions:

1. Be sure to read ALL questions and passages carefully.
2. Please answer ALL questions honestly. As a reminder, your answers are completely confidential and will not in any way be associated with your name.
3. You will be given the option to "EXIT SURVEY" or "CONTINUE" at the bottom of each page of the survey. Only choose the "EXIT SURVEY" option if you do not wish to finish the survey.

Next

APPENDIX O - DEBRIEFING/CONSENT FORM

UNIVERSITY OF HAWAII

DEBRIEFING CONSENT FORM

Sexual Behavior and Attitudes

Thank you for your participation in our research project, titled Sexual Behavior and Attitudes. In order to get the information we were looking for, we had to withhold some aspects of this study. Now that the research is over, I will describe the **deception** to you, answer any questions you may have, and provide you with the opportunity to make a decision on whether you would still like to have your data included in this study.

TRUE PURPOSE OF THE RESEARCH

The purpose of this research project is to measure the influence of physical attractiveness on willingness to pursue romantic relationships and engage in risky and safer sexual activity with persons infected with genital herpes. This study also seeks to measure the attitudes that people may have about genital herpes or persons infected with genital herpes. Participants in this study were randomly assigned to see photos of either average or attractive people. Participants were also randomly assigned to read a description of the person in the photo as having oral herpes, genital herpes, or no mention of sexually transmitted infections. These details were withheld to reduce the likelihood of these details influencing participants' responses. If other potential participants knew the true purpose of the study, it might affect how they answer or interact with our study. Therefore, we ask you not to share the information discussed above.

VOLUNTARY PARTICIPATION

Although you have already completed your participation in this study, your involvement is still voluntary. You may choose to withdraw the data you provided prior to this debriefing, without penalty or loss of compensation offered to you. Withdrawing your submission will not negatively affect your relationship with the University of Hawaii, the researchers, or any of our affiliates.

PRIVACY/ CONFIDENTIALITY

If you agree to allow us to use your data, we will maintain confidentiality of the information you have provided by keeping the answers to the questions you provided completely anonymous. Your answers will in no way be associated with any of your personally identifiable information, and they will be analyzed as part of a larger group of data. Furthermore, your survey responses will be encrypted in a password protected computer.

CONTACT

The main researcher conducting this research project is Paul Thornton, a PhD student in the Social Psychology department at the University of Hawaii. If you have any questions or concerns later regarding this research project, you may contact Paul Thornton at pdt@hawaii.edu, or you may contact Paul's faculty advisor, Dr. Elaine Hatfield, at (808) 956-6276.

If you have any questions about your rights as a participant in this research project, you can contact the University of Hawaii Human Studies Program by phone at 808-956-5007 or by e-mail at uhirb@hawaii.edu.

In the event you feel you sustained any emotional harm as a result of participating in this study, please contact the on-call counselor at the University of Hawaii Student Counseling Center at (808) 832-3100.

.....
You can print this form for your records before making your selection below.

Print

I have read this debriefing form, and I understand the true intent of this study and the purpose of my participation in the study titled "Sexual Behavior and Attitudes."

PLEASE SELECT ONE OF THE FOLLOWING OPTIONS:

- I CONSENT** (I consent to allowing the data collected from me during the study to be included for the purpose of the study).
- I DO NOT GIVE PERMISSION** (I do not give permission to allow the data collected from me during the study to be included for the purposes of the study. I understand that my data will be removed from the study and destroyed).

