BINEGATIVITY, CAUSAL ATTRIBUTIONS, AND ADULT ATTACHMENT

A DISSERTATION

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF DOCTORATE OF PHILOSOPHY

IN THE GRADUATE SCHOOL OF THE

TEXAS WOMAN'S UNIVERSITY

DEPARTMENT OF PHILOSOPHY AND PSYCHOLOGY

COLLEGE OF LIBERAL ARTS AND SCIENCES

BY

STEPHANY L. MAHAFFEY, M.S.

DENTON, TEXAS

AUGUST 2013

ACKNOWLEDGMENTS

This dissertation would not have been possible without continuous support from family, friends, colleagues, and mentors. I would like to start by recognizing my dissertation chair and mentor, Dr. Jenelle Fitch, for her professional guidance, unrelenting support, and unwavering faith in my abilities. I am sincerely grateful for the relationship we have developed over the years, and I look forward to fostering this relationship as I transition from a psychology graduate student to an early career psychologist. I am also extremely grateful for my supportive dissertation committee, Drs. Asbury, Cruz, and Harris, for their expertise and providing valued feedback and support in this process.

In addition, I would like to extend my gratitude to friends and colleagues who provided continuous support and encouragement throughout the process. In particular, Elizabeth Aranda, has been one of my closest friends and greatest supporters during this grueling dissertation process. Elizabeth has been a fantastic cheerleader, a strong advocate, an understanding confidant, and a trustworthy liaison to Denton while I have been out of town. I knew from the moment that I met Liz at her interviews that we would lifelong friends! Another dear friend and cheerleader in my life, Nathan Willmore, passed away before he could see me complete my dissertation. Nathan helped edit my graduate school application many years ago and he even gave me a hard time about my

dissertation procrastination in the last few days of his life. I was blessed to be with Nate during his last weeks on this earth. He is deeply missed.

Finally, I would like to recognize my parents, whose love and support has been unwavering throughout my many years of graduate school and whose support I could not have survived without. My father has gone as far as to read a how-to guide for dissertations so he could better understand my struggles and be the most supportive parent possible in this process. My mother has been a great supporter of my academic career since the day she lied about my potty-training progress to get me into Montessori school at the age of two. Without my parents' constant support and encouragement, I would have never come so far in my career and so close to my dreams.

ABSTRACT

STEPHANY L. MAHAFFEY

BINEGATIVITY, CAUSAL ATTRIBUTIONS, AND ADULT ATTACHMENT

AUGUST 2013

The purpose of the present study was to evaluate potential predictors of binegativity, specifically looking at binegativity's relationship with attributions of controllability of sexual orientation and adult attachment style. Previous research had demonstrated a significant relationship between attributions of causality and sexual orientation stigma. When sexual orientation of lesbian women and gay men was attributed to biological factors, levels of homophobia decreased and those people were more willing to offer help (Arnesto & Weisman, 2001; Hegarty & Pratto, 2001; Sakalli, 2002; Swank & Raiz, 2010; Wood & Bartowski, 2004). The relationship between attributions of bisexuality orientation and attitudes regarding bisexuality had not been measured before this current study. Research in the area of adult attachment has demonstrated that individuals who are securely attached are more open to new ideas, experiences, and people (Mikulincer, 1997; Mikulincer & Horesh, 1999; Mikulincer et al., 2001) and only three previous studies had evaluated the relationship between attribution and homophobia with mixed findings (Gormley & Lopez, 2010; Marsh & Brown, 2011; Schwartz & Lindley, 2005). The current study sought to evaluate the relationship between adult attachment styles and binegativity.

Participants were recruited through the use of advertising on a popular social media site, Facebook. The sample included in the analysis consisted of 365 primarily Caucasian individuals (287 women, 76 men) with ages ranging from 18 to 82 (M = 34.30) who were significantly more educated than the average American. The sample was significantly skewed toward being securely attached (low anxiety, low avoidance) and were likely to have a close relationship with someone who is bisexual. These two statistical difficulties limited the results of this study and further research is warranted. Overall, there was a significant relationship between attributions of sexual orientation, adult attachment, and binegativity. As predicted, attribution of sexual orientation was the strongest predictor of binegativity. As further predicted, adult attachment was related to binegativity; however, only attachment-related avoidance was predictive of binegativity. Attachment-related anxiety was not a significant predictor of binegativity.

TABLE OF CONTENTS

Page

ACKNOWLEDGMENTS iii

ABSTRACT v

LIST OF TABLES x

LIST OF FIGURES xii

Chapter

I. INTRODUCTION 1

Statement of Purpose 5
Definition of Key Terms 6

II. LITERATURE REVIEW 11

Sexual Orientation 11
Historical Background of Sexual Minorities 11
History of bisexuality 15
Sexual Minorities Current Status 16
Institutionalized discrimination 17
Orientation-motivated violence 19
Sexual Minorities and Mental Health 21
Mental health morbidity research 22
Mental health risk for bisexual individuals 24
Unique Characteristics and Challenges of the Bisexual Community 26
Bisexual identity development 26
Bivisability. 29
Binegativity and double discrimination 30
Attribution Theory 32
The Origins of Attribution Theory 33
Stigma, Prejudice, and Attribution Theory 34
Stigma, Prejudice, and Sexual Orientation Beliefs 38

Strengths and Weaknesses of Research on Attribution Theory 50
Adult Attachment 52
History of Attachment Theory 53
Understanding and Measuring Adult Attachment 56
Attachment-Style Differences in Openness to Experience .. 62
Summary and Statement of the Problem 66
Research Questions and Hypotheses 68
Hypothesis one 69
Hypothesis two 70
Hypothesis three 70

III. METHODOLOGY 71

Participants 71
Procedure 74
Measures 75
Demographics Questionnaire 74
Unidimensional Relationship Closeness Scale 76
Beliefs about Causality of Sexual Orientation 77
Experiences in Close Relationships - Relationship Structures 78
Biphobia Scale 81
Attitudes Regarding Bisexuality Scale - Female and Male Form..... 83

IV. RESULTS 88

Preliminary Statistical Analyses 88
Preliminary Data Screening 89
Preliminary Analyses 88
Analysis of Hypotheses 92
Hypothesis One 92
Hypothesis Two 95
Hypothesis Three 98
Post-Hoc Analyses 102
Summary 106

V. DISCUSSION 108

Summary of Findings 109
Preliminary Analysis 109
Primary Analyses 111
Hypothesis One 111
Hypothesis Two 112

Hypothesis Three ... 113
Secondary Analyses ... 114
Strengths, and Limitations ... 116
Research, Theoretical, and Clinical Implications ... 120
Research Implications ... 120
Theoretical Implications ... 121
Clinical Implications ... 123
Relevance to the Field of Counseling Psychology ... 125
Conclusions ... 126

REFERENCES ... 128

APPENDICES

A. Informed Consent ... 157
B. List of Mental Health Resources ... 160
C. Demographics Questionnaire ... 162
D. Relationship Closeness Scale ... 164
E. Beliefs about Causality of Sexual Orientation ... 166
F. Experiences in Close Relationships - Relationship Structures ... 168
G. Biphobia Scale ... 174
H. Attitudes Regarding Bisexuality Scale - Female Form and Male Form 179
I. Copy of IRB Approval Letter ... 182

LIST OF TABLES

Tables Page

1. Descriptive Statistics for Gender, Education, Income, and Ethnicity.................. 73

2. Descriptive Statistics and Internal Consistency Reliabilities for Scales and Subscales 87

3. Spearman Rho Correlations of the Measures Utilized in the Study. 90

4. Multinomial Regression Predicting Biphobia Categories from Global Avoidance and Global Anxiety Scores 93

5. Multiple Logistic Regression Predicting High Tolerance Scores from Global Avoidance and Global Anxiety Scores 94

6. Multiple Logistic Regression Predicting High Global Stability Scores from Global Avoidance and Global Anxiety Scores 95

7. Multinomial Regression Predicting Biphobia Category from Causality of Sexual Orientation-Lesbian/Gay and Causality of Sexual Orientation-Bisexual Scores 96

8. Multiple Logistic Regression Predicting High Global Tolerance Scores from Causality of Sexual Orientation-Lesbian/Gay and Causality of Sexual Orientation-Bisexual Scores 97

9. Multiple Logistic Regression Predicting High Global Stability Scores from Causality of Sexual Orientation-Lesbian/Gay and Causality of Sexual Orientation-Bisexual Scores 98

10. Multinomial Regression Predicting Biphobia Category from Global Avoidance Scores, Causality of Sexual Orientation-Lesbian/Gay and Causality of Sexual Orientation-Bisexual Scores 99

11. Multiple Stepwise Logistic Regression Predicting High versus Low Global Tolerance Scores from Global Anxiety and Avoidance Scores, Causality of Sexual Orientation-Lesbian/Gay, and Causality of Sexual Orientation-Bisexual 101

12. Multiple Stepwise Logistic Regression Predicting High versus Low Global Stability Scores from Global Anxiety and Avoidance Scores, Causality of Sexual Orientation-Lesbian/Gay, and Causality of Sexual Orientation-Bisexual 102

13. Multinomial Regression Predicting Biphobia Category from Global Avoidance Scores, Causality of Sexual Orientation-Lesbian/Gay Causality of Sexual Orientation-Bisexuality, and Do Not Know Bisexual 104

14. Multiple Logistic Regression Predicting High versus Low Global Tolerance Scores from ECR Anxiety and Avoidance Scores, Causality of Sexual Orientation-Lesbian/Gay, Causality of Sexual Orientation-Bisexual, and Do Not Know Bisexual 105

15. Multiple Logistic Regression Predicting High versus Low Global Stability Scores from ECR Anxiety and Avoidance Scores, Causality of Sexual Orientation-Lesbian/Gay, Causality of Sexual Orientation-Bisexuality, and Do Not Know Bisexual 106

LIST OF FIGURES

Figure Page

1. Bartholomew's two-dimensional attachment pattern for adults................................ 59

CHAPTER I

INTRODUCTION

A recent survey of 208 Clinical Members of the American Association of Marriage and Family Therapy revealed that an overwhelming percent of therapists learn about sexual minority issues first-hand through clinical experience (Green, Murphy, Blumer, & Palmanteer, 2009). Only 65% of the participating therapists reported receiving training about sexual orientation issues in graduate school and less than half reported discussing sexual orientation issues with a clinical supervisor. These gaps in training are inexcusable when sexual minority clients, who likely experience additional life stressors because of the stigma of their orientation, tend to access mental health care at a higher rather than their heterosexual counterparts (Cochran & Mays, 2006; Cochran, Sullivan, & Mays, 2003).

The American Psychological Association recently released the updated Guidelines for Psychological Practice with Lesbian, Gay, and Bisexual Clients (APA, 2012). In general, APA guidelines are designed to be recommendations of appropriate conduct around particular areas of practice. These particular practice guidelines help inform psychologists how to work with sexual minority clients, how to approach research regarding sexual orientation, and how psychologists can participate in social justice. These guidelines suggest that professionals be aware of the impact stigma, prejudice, discrimination, and violence have on sexual minority individuals. The fifth guideline

states specifically professionals need “to recognize the unique experiences of bisexual individuals" (APA, p. 16). Research in the area of bisexuality remains limited, especially research evaluating prejudice toward bisexual women and bisexual men specifically (Firestein, 2007a; Klein, 1995; Ochs, 2009, 2011). The current study is designed to evaluate predictors of prejudice against bisexual men and women.

Research in the area of sexual minorities frequently combines sexual minorities to increase the statistical power of their empirical findings (Dodge & Sandfort, 2007). The consequences of ignoring these groups in empirical research are twofold: (a) the mental health research of sexual minorities is limited to generalizations and extrapolations and (b) the needs of smaller groups of sexual minorities are misunderstood or missed completely (Ryan, Brotman, & Rowe, 2000). Using the collapsed category, LGB, obscures the unique experiences and challenges faced by each group (APA, 2012). The combined results of the data analysis may skew the results, potentially overestimating frequencies in one sexual minority subgroup while simultaneously underestimating frequencies of another subgroup (Moradi, Mohr, Worthington, & Fassinger, 2009). Other researchers choose to remove smaller subgroups from their data to simplify their analysis, creating large gaps in research that leave therapists ill-equipped to work with various subsets of sexual minority individuals (Cochran, 2001; Cochran & Mays, 2006). It is imperative researchers conceptualize and measure bisexuality as an independent and distinct construct of sexual orientation in order to fully understand the unique qualities and challenges.

Bisexual women and men face unique problems as a result of the invisibility and invalidation of bisexuality as a distinct category of sexual orientation (Bradford, 2004; Ochs, 2011; Weiss, 2003). Bisexual men and women must endure heterosexism as well as monosexism, the belief that exclusive homosexuality or exclusive heterosexuality are superior or more valid than a bisexual orientation (Herek, 2003; Israel & Mohr, 2004; Ochs, 1996, 2009). Monosexist beliefs that may negatively affect bisexual individuals include the idea that bisexuality is just a stage on the way to an exclusive sexual orientation or that bisexuals are actually heterosexuals acting out for attention (Mulick & Wright, 2002; Thomas, 2011). The additional stress created by living in a society where one's sexual orientation is challenged and discounted has an adverse effect on bisexual identity development and can lead to poor mental health outcomes (D'Augelli, Grossman, Hershberger, & O'Connell, 2001; Herek, Gillis, & Cogan, 2009; Jorm et al, 2002; Udry & Chantala, 2002; Warner et al., 2004).

Research has started to focus on understanding individual difference variables that may clarify or predict negative attitudes toward sexual minorities (Fox, 2006; Herek, 2002). Knowledge in such areas is crucial in creating programs and interventions designed to reduce sexual stigma through social outreach, working with sexual minority clients and client families of sexual minority individuals, as well as informing social outreach (Moradi et al., 2009). The two variables of interest in the current study are sexual orientation beliefs and adult attachment. We are interested in understanding how these factors might predict levels of biphobia and attitudes regarding bisexuality.

Sexual orientation beliefs refer to the causality that is placed on the origins of sexual orientation (Arnesto & Weisman, 2001; Hegarty & Pratto, 2001; Sakalli, 2002; Tygart, 2000; Whitley, 1990). Earlier research had demonstrated a significant relationship between attributions of causality and prejudice. Specifically, when the cause of a biased trait is deemed uncontrollable, then the reactions to that person are more affirming and empathic (e.g., De Jong, 1980; Juvonen, 1991, 1992; Weiner, 1993; Weiner, Perry, & Magnusson, 1988; Weisman, López, Karno, & Jenkins, 1993). Attribution research in the area of sexual orientation stigma found similar results. When sexual orientation of lesbian women and gay men was attributed to biological factors, levels of homophobia decreased and those people were more willing to offer help (Arnesto & Weisman, 2001; Hegarty & Pratto, 2001; Sakalli, 2002; Swank & Raiz, 2010; Wood & Bartowski, 2004). Conversely, people who attributed sexual orientation to personal choice scored higher on measures of homophobic attitudes and were less willing to help that person. At this time, no researchers have evaluated the relationship between attributions of bisexuality orientation and attitudes regarding bisexuality.

Adult attachment refers to the level of security a person feels in their close relationships and how they use that feeling of attachment as a secure base to explore and engage in new experiences (Bowlby, 1988; Lopez & Brennan, 2000). Research has demonstrated that individuals who are securely attached are more open to new ideas, experiences, and people (Mikulincer, 1997; Mikulincer & Horesh, 1999; Mikulincer et al., 2001). Several studies determined that secure attachment or using methods to prime

the secure base are positively related to openness to out-group members (di Pentima & Toni, 2009; Gormley & Lopez, 2010; Marsh & Brown, 2011). Of the three studies that evaluated the relationship between attribution and homophobia, two of the studies found a positive relationship between secure attachment and acceptance of sexual minorities (Gormley & Lopez, 2010; Marsh & Brown, 2011) and one study found no relationship (Schwartz & Lindley, 2005). Further research focusing on the relationship between adult attachment and attitudes toward sexual minorities is warranted.

The current research study is designed to gain a deeper understanding of the variables that predict prejudice against sexual minorities, especially negative attitudes about bisexuality and bisexual individuals. The following literature review covers the major research areas related to the present investigation, including sexual orientation, bisexuality, sexual minorities' mental health, attachment theory, and attribution theory. This literature review concludes with the rationale for the investigation and the current study's research questions.

Statement of Purpose

The purpose of the current study is to examine the relationships and interactions between the causal attribution of bisexuality, adult attachment style, and binegativity. Binegativity will be measured using the Biphobia Scale (Mulick & Wright, 2002) and the Attitudes Regarding Bisexuality Scale (ARBG, Mohr & Rochlen, 1999). It is hypothesized that attachment-related anxiety and attachment-related avoidance will be significant predictors of biphobia scores and attitudes regarding bisexuality. Higher

levels of attachment-related anxiety and avoidance will predict higher levels of biphobia and less positive attitudes regarding bisexuality. It is further hypothesized that attachment-related avoidance will be a stronger predictor of binegativity than attachment-related anxiety. Finally, it is hypothesized that attributions of bisexual orientation will be a significant predictor of binegativity. Specifically, attribution of bisexual orientation to personal choice will predict higher levels of biphobia and negative attitudes toward bisexuality. Conversely, the attribution of bisexuality to biological or environmental causes will predict lower levels of biphobia and more positive attitudes regarding bisexuality. Finally, it is hypothesized that attribution of bisexual orientation will be the strongest predictor of binegativity when compared to attachment-related anxiety and attachment-related avoidance.

Definition of Key Terms

Throughout the review, terminology related to sexual orientation will reflect the guidelines for reducing bias as cited in APA's (2010) most recent publication manual, and the Guidelines for Psychological Practice with Lesbian, Gay, and Bisexual Clients (APA, 2012), therefore the terms used in this literature review may not match the terminology utilized in the original studies. The following terms are operationally defined for the purposes of this research investigation and reflect the guidelines for reducing bias as cited in the Publication Manual of the American Psychological Association (APA, 2010).

Binegativity: refers to a set of prejudiced attitudes about bisexual persons and the sexual orientation of bisexuality (Obradors-Campos, 2011; Yost & Thomas, 2011). Binegativity includes the denial of bisexuality as a valid sexual orientation, the belief that bisexuality is a transitory state, as well as a number of myths relating to bisexuality (Israel & Mohr, 2004; Yost & Thomas, 2011). Some examples of binegative myths include the idea that bisexuals are promiscuous, bisexuals cannot be satisfied in a monogamous relationship, bisexuals are disease carriers, bisexuals are indecisive, and bisexuals are lesbians or gay men clinging to heterosexual privilege (Klesse, 2011; Obradors-Campos, 2011; Ochs, 2011).

Bisexuality: refers to a cognitive, emotional, or sexual desire that is not exclusively limited to the other person's sex or gender characteristics (Ochs, 2011; Rust, 2000). *Bisexual attraction* refers to having sexual attraction to both women and men. *Behavioral bisexuality* refers to having sexual relationships with both women and men. *Romantic bisexuality* refers to having romantic feelings for both women and men. *Self-identified bisexuality* refers to identifying one's sexual orientation as bisexual (Potoczniak, 2007).

Coming out: refers to the development and acceptance of a sexual minority identity (APA, 2012). When referring to the degree in which a person may be open about their sexual orientation, it is often described as an individual's level of *outness* (Koh & Ross, 2006). Oftentimes, sexual minorities carefully decide who they will come out to first and in what areas of their life they will be *out*. Due to issues of physical safety or

acceptance, sexual minorities may not be out to certain people in their lives or in particular situations (Herek & Garnets, 2007).

Discrimination: is a term that refers to a harmful or an unjustified negative act toward a specific member of a group, or by just simply because of his or her membership toward that special group. Discrimination is conceptualized as the physical component of prejudice and is often the result of stigma and prejudice (Herek, 2000).

Heterosexism and *homonegativity*: both refer to the set of negative affect, attitudes, and assumptions about nonheterosexuals and nonheterosexuality that are prevalent in society (Herek, 2008; Hudson & Ricketts, 1980). Heterosexism or homonegativity were once referred to as homophobia, a term that has been criticized for focusing too much on the fear and avoidance of sexual minority persons (Hudson & Ricketts, 1980; Szymanski, Kashubeck-West, & Meyer, 2008). *Internalized heterosexism* or *internalized homonegativity* is the internalization of stigma that results in negative feeling toward oneself (Szymanski et al., 2008).

Monosexism: refers to the belief that exclusive homosexuality or exclusive heterosexuality are superior or more valid than a bisexual orientation (Herek, 2003; Israel & Mohr, 2004; Ochs, 1996, 2009). *Monosexist beliefs* include the denial of bisexuality as a valid sexual orientation, the belief that bisexual persons are confused heterosexuals, or that bisexuality is merely a phase one passes through on the way to an exclusively same-sex sexual orientation (Mulick & Wright, 2002; Thomas, 2011).

Prejudice: is defined as a given attitude about a specific group of people or toward people who share some commonality that triggers an affective or a cognitive component of the individual (Herek, 2008; Russell & Bohan, 2006). Prejudice is based exclusively on a person's membership in a specified group or their presumed membership in a group based on some visible factor. Assumptions and judgments are made about an individual based on their membership, real or supposed, ignoring specific or distinguished characteristics or attitudes (Herek, 2000). In a general sense, prejudice can be said to be a negative prejudgment of a group and its individual members involving affections, beliefs, and cognitions (Meyer, 2003).

Sexual orientation: "refers to the constellation of affective, cognitive, and behavioral characteristics that constitute an individual's sense of self as a sexual and intimately relational being" (Fassinger & Arseneau, 2007, p. 30). Although sexual orientation may best be understood along a continuum, there are three primary categories, lesbian, gay, and bisexual (LGB), with which the majority of sexual minority individuals choose to identify.

Sexual minority: is a term that includes anyone who does not identify with an exclusively heterosexual orientation. Sexual minorities are a diverse group that vary in gender identity and sexual orientation, but share common experiences such as stigmatization and discrimination (Fassinger & Arseneau, 2007).

Sexual stigma: refers to the stigma attached to any non-heterosexual behavior, same-sex relationships, or sexual minority identity (Herek, 2008). Most sexual minorities

encounter stigma early in life and those stigmatizing experiences shape how they understand and interact with the world around them (Szymanski, 2009). *Stigma* is a term that refers to the inferior status, negative value, and the lack of power that society gives to people associated with certain circumstances, statuses, or attributes. What characteristics or people are stigmatized is decided by society collectively and is dependent on place and time (Herek, 2008). Sexual minorities are historically marginalized in their social status because sexual minorities do not conform to traditional gender roles and expectations. Their nonconformity is the basis for stigma, resulting in prejudice and discrimination (Herek, 2008).

CHAPTER II

LITERATURE REVIEW

The purpose of this chapter is to review and conceptualize the professional literature related to the three variables of this study. First, an introduction to sexual orientation and bisexuality will be provided followed by sections on attribution theory and adult attachment style. The chapter will close with a brief summary of the literature review and the hypotheses for the current study.

Sexual Orientation

Because of the limited amount of research specifically regarding bisexuality, a large portion of this literature review will draw from sexual minority research studies that included bisexual women and men. Attempts were made to utilize sexual minority research that separated the different sexual minority groups in their data analysis. Sexual minorities included in this literature review are lesbian women, gay men, bisexual men, and bisexual women.

Historical Background of Sexual Minorities

Prior to the etymology of the term homosexual, women and men who did not fit into the category of heterosexual were known as *sexual inverts* (Ellis, 1927). Sexual inverts were believed to retain both masculine and feminine qualities (Hirschfeld, 2000). Male inverts were believed to be weaker and more passive than their heterosexual counterparts were, while female inverts were viewed as more masculine and sexually

charged. It was Freud (1937), who began to distinguish sexual orientation by the preference of the partners' biological sex. Psychoanalytic research in the early 20th century replaced the idea of multiple non-normative inversions with the totalizing concept of *homosexuality* (Rado, 1940). Currently, *sexual minority* (Calzo, Antonucci, Mays, & Cochran, 2011) is the preferred term to incorporate gay men, bisexual individuals, or *nonheterosexual* (Talley, Tomko, Littlefield, Trull, & Sher, 2011), men and women.

In order to appreciate the culture of a population, a necessary first-step often involves exposure to a group's history and heritage. As a minority group, lesbian, gay, and bisexual (LGB; hereafter referred to as *sexual minorities*) men and women have a long and perilous history of maltreatment involving intolerance, harassment, discrimination, and hostility (see Fassinger & Arseneau, 2007; Firestein, 2007b; Herek, 2008; Potoczniak, 2007; Sullivan, 2003). Early accounts of violence directed toward sexual minorities date back to as early as 1075 BCE, when, according to the *Code of the Assyrians*, the punishment for any man caught having intercourse with another man was castration (Arkenberg, 1998). The following passage from the Old Testament of the Bible is equally violent, "If a man also lie with mankind, as he lieth with a woman, both of them have committed an abomination: they shall surely be put to death; their blood shall be upon them" (Leviticus 20:13, King James Version). Although there is disagreement among religious leaders regarding the interpretation of such passages, researchers who study sexuality and sexual diversity contend that Biblical references

about homosexuality continue to significantly impact anti-homosexual and homonegative attitudes (Altemeyer, 2003; Sullivan & Wodarski, 2002).

In writings that were more contemporary, sexual minorities continued to be a target for pathology and judgment. Homosexuality is listed as a sociopathic personality disturbance in the first edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-I; American Psychiatric Association, 1952). Sexual stigma derived much of its legitimacy during the past century from sexual minorities' status as a psychopathology. U.S. sodomy laws banning certain non-procreative sexual acts existed in all 50 states until 1961 (Jordan, 1997). These laws were used as reasonable cause to raid bars and clubs catering to sexual minorities. Sodomy laws were also used to justify discrimination against sexual minorities in other areas, such as employment, child custody, and immigration (Leslie, 2000).

The classification of homosexuality as a psychiatric illness prompted mental health providers to begin looking for treatment methods aimed at curing homosexuality (Koh & Ross, 2006). Conversion therapies were designed to help individuals with same-sex attractions live a heterosexual lifestyle (Spitzer, 1973). These therapies were not only unsuccessful; they were psychologically harmful and at times physically painful to patients (APA, 2012; APA Task Force on Appropriate Therapeutic Responses to Sexual Orientation, 2009). Psychologists and psychiatrists' application or misapplication of sexual orientation change efforts (SOCE) further damaged the already strained

relationship between sexual minorities and mental health providers (King & Bartlett, 1999; Koh & Ross, 2006).

Psychologists and psychiatrists' collective understanding of sexual orientation and sexual identity began shifting when Kinsey, along with his colleagues (1948, 1953), released their scientific findings on human sexuality. Kinsey and his colleagues discovered that a significant portion of the population had experienced at least one same-sex sexual experience. In their report on men's sexuality, they reported that approximately 37 percent of the respondents had reported at least one same-sex sexual experience to the point of orgasm. Furthermore, Kinsey and his colleagues were the first to consider human sexuality a continuous and potentially fluid construct.

Around the same time Kinsey's work was gaining attention, Ford and Beach (1951) published their research in *Patterns of Sexual Behavior* which included a chapter on homosexuality. Ford and Beach collected information about sexual behavior in seventy-six societies around the world and found that same-sex sexual behavior was socially accepted in a majority of those cultures. Shortly thereafter, the National Institute of Mental Health funded a study to determine if homosexuality was, in fact, related to psychopathology. Hooker (1957) was the first of many to determine that psychopathology and sexual minority status were not inherently linked. Kinsey et al. (1948, 1953), Ford and Beach (1951), and Hooker's (1957) research provided the foundation for activists to challenge the categorization of homosexuality as a mental

illness and protest the discriminatory practices that resulted from such a definition in the 1960s.

In 1969, the Stonewall Rebellion was a catalyst for the civil rights movement for sexual minorities. The rebellion was a result of the police raid of a gay bar in Manhattan, New York, named the Stonewall Inn. Patrons of the Stonewall Inn resisted the raid and rioted in the streets with other bar patrons and neighbors. These riots lasted for several nights and are believed to have been the catalyst that inspired sexual minorities across the U.S. to begin demanding equal treatment and protection for sexual minorities (Adam, 1995). In 1975, the American Psychiatric Association (APA) released the DSM-III, in which homosexuality was no longer considered a mental illness. The shift away from homosexuality being classified as a mental disorder marked another pivotal point in the contemporary history of sexual minorities.

History of bisexuality. In contemporary history, bisexuality has been considered a temporary stage in adolescent development or a step toward developing a lesbian or gay identity (Firestein, 2007a). In the 1930s, Freud believed that bisexuality was inherent and normative in all individuals and that bisexuality was essential for understanding psychosexual development. Freud (1937/1963) claimed that all humans naturally experienced homosexual and heterosexual feelings and saw bisexuality as helpful in explaining later homosexual orientation. In the 1940s, Kinsey and his colleagues were the first to describe sexual orientation along a continuum. Kinsey created a seven-point scale to illustrate sexual orientation ranging from exclusive heterosexuality to exclusive

homosexuality (Kinsey, Pomeroy, Martin, & Gebhard, 1953). Bisexuality remained largely ignored until after the sexual revolution of the 1960s and the civil rights movement of the 1970s challenged individuals to think differently about social categories, gender, race, and sexual orientation.

In the 1980's, psychologists started to conceptualize sexual orientation multidimensionally with the help of the Klien Sexual Orientation Grid (KSOG; Klien, Sepekoff, & Wolf, 1985). The KSOG evaluated sexuality within a non-static multidimensional framework along several dimensions, including sexual attraction and fantasy, emotional preference, social preference, lifestyle, and self-identification. Each of these dimensions was evaluated through three frames: past, present, and ideal. With the help of the KSOG, psychologists could evaluate sexual orientation in a more accurate and comprehensive way. Sexual orientation could be viewed within a non-static multidimensional framework. However, it was not until the publication of the 2001 Guidelines for Psychotherapy with Lesbian, Gay, and Bisexual Clients that bisexuality was officially acknowledged as a valid sexual orientation by professional psychologists (American Psychological Association [APA], 2001).

Sexual Minorities Current Status

Most sexual minorities encounter stigma early in life and those stigmatizing experiences shape how they understand and interact with the world around them (Szymanski, 2009). What characteristics or people are stigmatized is decided by society collectively and is dependent on place and time (Herek, 2008). A brief review of current

discrimination, prejudice, and violence against sexual minorities in the United States will be reviewed.

Institutionalized discrimination. Although great strides have been made toward social equality, sexual minorities continue to face *institutionalized heterosexism*. Institutionalized heterosexism is a form of institutionalized discrimination that refers to the societal-level conditions that constrain the opportunities, resources, and well-being of sexual minorities (Hatzenbuehler, McLaughlin, Keyes, & Hasin, 2010; Hegarty, 2007). In a recent International Lesbian, Gay, Bisexual, Trans and Intersex Association's report, more than 76 countries continued to prosecute same-sex sexual behavior and same-sex sexual behavior was punishable by death in five of those countries (Bruce-Jones & Itaborahy, 2011). Although most Western societies no longer condone violence against sexual minorities, few have yet to implement statutes and legislation that would ensure equal protection. For example, it was not until 2003 when the constitutionality of sodomy laws was again challenged during *Lawrence v. Texas*. It was at that time the Supreme Court determined sodomy laws were unconstitutional, invalidating sodomy laws that still existed in 14 states (Jordan, 1997; Hegarty, 2007).

Sexual minorities continue to have fewer legal rights, protections, and benefits than their heterosexual counterparts do in the United States (D'Augelli, 2002; Herek, 2004; Herek et al., 2009; Jordan, 1997; Kitzinger & Wilkinson, 2004). For example, while some city and county ordinances have adopted policies that protect sexual minorities against employment discrimination based on sexual orientation, the

establishment of a federal law that protects individuals from employment discrimination on the basis of sexual orientation is notably absent (S. 811, 2011). Likewise, same-sex couples and families are not included in the Consolidated Omnibus Budget Reconciliation Act (COBRA) that mandates employers provide health coverage to spouses and dependent children in the event of job loss (S. 563, 2011). Moreover, same-sex couples are not granted the benefits of the Family and Medical Leave Act (FMLA), which guarantee family members the right to take time off work to take care of their seriously ill partner (H.R. 2364, 2011). In addition, same-sex partners are not provided equal access to immigration benefits, such as green cards or immigrant visas, that are extended to heterosexual couples (S. 821, 2011).

Another example of institutionalized heterosexism is the Defense of Marriage Act (DOMA) passed by Congress in 1996, which defined marriage as a legal union that can only be entered by one woman and one man for the purposes of federal law. Furthermore, DOMA prohibits states from recognizing same-sex marriages performed in other states (Defense of Marriage Act, 1996). As a result, more than 1,000 federal rights and obligations are denied to same-sex couples, as well as being excluded from receiving benefits from Social Security. Even in states that recognize same-sex partnerships, the states cannot require employers to extend retirement benefits, healthcare benefits, or medical leave to couples in same-sex relationships (Kitzinger & Wilkinson, 2004). Having separate laws for sexual minorities and same-sex couples legitimizes a social structure where heterosexuality dominates sexual minorities and places sexual minorities

at greater risk of further discrimination and prejudice. Unchecked negative attitudes risk being acted upon in the form of physical aggression (Carroll, 2009; D'Augelli, 2002).

Orientation-motivated violence. In the past few years, there has been a strong anti-sexual minority backlash in response to increased civil rights for persons of sexual minority status (Levitt et al., 2009). Hate crimes targeting sexual minorities have been on the rise (NCAVP, 2009). Hate crimes are when victim of a violent crime is selected because of his or her actual or perceived race, color, religion, disability, sexual orientation, or national origin (Harlow, 2005). The motivation behind hate crimes is to terrorize or intimidate an entire community by seeking to injure one member of that community (Marzullo & Libman, 2009). Hate crimes against lesbian women, gay males, and bisexual persons often occur because the perpetrators hold heterosexist ideals and are attempting to send a message to the broader community. These violent acts against sexual minorities will be further referred to as orientation-motivated violence.

The National Coalition of Anti-Violence Programs (NCAVP) provides a comprehensive examination of orientation-motivated violence in North America. The coalition is a partnership of 35 anti-violence organizations that gather detailed information concerning orientation-motivated violence in their region each year. In 2008, the regions reporting to the NCAVP included the cities of Chicago, IL; Columbus, OH; Houston, TX; Kansas City, MO; Los Angeles, CA; Milwaukee, WI; New York and Rochester, NY: and San Francisco. Additional data was reported by Colorado, Michigan, Minnesota, and Pennsylvania. These regions reported a 26% increase in orientation-

motivated violence reported in 2006 and 2008. Sexual assault crimes against LGBT people have been on the rise the past three years. Reports of orientation-motivated sexual assault increased 48% between 2007 and 2008. Orientation-motivated violence resulting in death increased to an all-time high in 2008. This number was matched only once before in 1999, the year following the violent murder of Matthew Sheppard for being an openly gay man (NCAVP, 2008).

The Federal Bureau of Investigation (FBI) also collects data on orientation-motivated violence. According to the U.S. Bureau of Justice's annual crime victimization survey, nearly 18 percent of crimes reported were related to the victim's sexual orientation and less than half of those incidents were reported to the authorities between 2000 and 2003 (Harlow, 2005). Orientation-motivated violence is significantly under-reported because sexual minority victims may not wish to be identified as a sexual minority in a police report (Herek, 2008). In addition to individuals' lack of reporting orientation-motivated violence, law enforcement responding to such incidents may not perceive the crime to be hate-motivated or may not have protocols in place to report such hate crimes. Lastly, crimes against individuals of multiple minority identities can be oversimplified by the FBI and categorized as a multiple bias attack (Marzullo & Libman, 2009).

Violence targeted at people because of their perceived sexuality can be damaging to their health, both psychologically and physically (Carroll, 2009). Orientation-motivated violence is equally detrimental to the sexual minority community. Herek

(2008) reported that criminal victimization was significantly related to depression and anxiety, sleep disturbances, suicidal ideation, and interpersonal difficulties among sexual minorities. Some research suggests that hate crime victimization is more psychologically detrimental than traditional crime victimization. Herek et al. (2009) indicated that orientation-motivated crime victims report more symptoms of depression, anger, anxiety, and posttraumatic stress than victims of traditional crimes do.

Sexual Minorities and Mental Health

Sexual minorities are at an increased risk for developing mental health problems compared to their heterosexual counterparts (Bostwick, Boyd, Hughes, & McCabe, 2010; Cochran, 2001; Cochran & Mays, 2006; Cochran et al., 2003; Herek & Garnets, 2007; Koh & Ross, 2006; Lewis, 2009; Meyer, Dietrich, & Schwartz, 2008). Although all human beings experience stress, the minority stress model postulates that sexual minorities, similar to other minority groups, experience higher rates of chronic stress as a result of the stigmatization and discrimination related to their minority status (Meyer, 2003). A significant link between social stigma and mental health has been found in a number of studies (e.g., Cochran & Mays, 2006; Hatzenbuehler et al., 2010; Koh & Ross, 2006).

Although there is a significant relationship between sexual minority status and mental health, a great deal of bias and confusion remains in the mental health field regarding the nature of this relationship (Herek & Garnets, 2007). The fact that sexual minorities have exhibited higher rates of psychopathology and psychological distress than

heterosexuals has perpetuated, if not reignited false assumptions that same-sex sexual orientation is a mental illness (Koh & Ross, 2006). Cochran (2001) acknowledged that science's "changing and often controversial perspectives on homosexuality" (p. 932) continue to be a significant obstacle in exploring the relationship between sexual orientation and mental health. Cochran urged future research to acknowledge that sexual minorities experience harm from facing a psychologically challenging world on a daily basis and that future research must examine the biases that permeate the field.

Mental health morbidity research. Cochran (2001) reviewed the sexual orientation and mental health morbidity and made several important conclusions: (a) there was sufficient evidence for increased risk of suicide attempts, depression, and substance use disorders for gay men and lesbians, (b) gay men and lesbians demonstrated significant differences from heterosexual men and women in terms of patterns of onset, causation, and course of mental health morbidity, and (c) gay men and lesbians were more frequent consumers of mental health services than heterosexual men and women. Cochran et al. (2003) found similar results using data from the MacArthur Foundation National Survey of Midlife Development in the United States (MIDUS; Brim et al., 1996) to examine the relationship between the utilization of mental health services and sexual orientation among self-identified lesbians, gay men, and bisexual individuals. Cochran et al. found the sexual minority participants had the highest rates of mental health morbidity, comorbidity, and mental health service utilization. According to the researchers, 20% of men and 24% of women of the self-identified sexual minorities

group met criteria for two or more psychological disorders in the past year (Cochran et al., 2003). That percentage is three to four times higher than heterosexual rates of comorbid psychological disorders. Although only 2.4% of the respondents identified as a sexual minority, they constituted 7% of the group of respondents who utilized mental health treatment.

To evaluate psychological well-being among sibling pairs, Balsam, Rothblum, & Beauchaine (2005) recruited self-identified lesbians, gay males, and bisexual individuals who were willing to provide the contact information for their siblings as a comparison group. The research packets sent to the siblings would not specify that the study was related to sexual orientation, thus participants did not need to be out about their sexuality to their family in order to participate in this study. The participants completed three measurements assessing their psychological well-being, including a brief self-report symptom inventory, a self-esteem measure, and a scale that evaluated their satisfaction with life. Participants were also asked if they had ever sought counseling, if they had been hospitalized for mental health reasons, if they had ever experienced suicidal ideation, attempted suicide, or engaged in self-injurious behavior.

As hypothesized by the authors (Balsam et al., 2005), participants of sexual minority status indicated significantly higher rates of suicidal ideation, suicidal attempts, self-injurious behavior, and were significantly more likely to have sought mental health services than their heterosexual counterparts. However, unlike previous findings, sexual minority status did not have a significant effect on the participants' current level of

psychological distress. The authors speculated that the low level of current distress may be a result of their data collection methods. They recruited using sexual minority organizations that may have led to a psychologically healthier sample (Balsam et al., 2005).

Among a sample of 1304 women (524 lesbians, 134 bisexuals, and 637 heterosexuals), researchers found that nonheterosexual orientation significantly influenced the probability of experiencing emotional stress (Koh & Ross, 2006). A significant relationship was perceived between a woman's level of outness and experiencing mental health problems. Lesbians who were not open about their sexual orientation and bisexuals that had disclosed their sexual orientation with others were more than twice as likely to have experienced suicidal ideation in the past 12 months. The women's level of outness also correlated significantly with past suicide attempts. Lesbians and bisexual women who were not out were more likely than heterosexual women to have reported at least one suicide attempt in their past.

Mental health risk for bisexual individuals. A number of studies noted higher rates of mental health problems among bisexual participants compared to lesbian, gay, and heterosexual participants (Dodge & Sandfort, 2007; Jorm, Korten, Rodgers, Jacomb, & Christensen, 2002; Koh & Ross, 2006). Jorm, et al. (2002) utilized data from a community survey of nearly 5,000 residents between the ages of 22 to 24 years old and 40 to 44 years old to assess psychological well-being among sexual minorities. Participants who self-identified as predominantly bisexual indicated significantly more

current adverse life events, less positive support from family, more negative support from friends, and were significantly more likely to indicate having financial difficulties than those participants who identify their sexuality as predominantly heterosexual. Compared to the participants who identified themselves as lesbian or gay, the bisexual participants continued to relate significantly more adverse life events and financial difficulty. The authors suggested that grouping bisexual men and women with gay men and lesbian women may result in an overestimation of the risk of mental health problems for lesbians and gay men, as well as an underestimation of mental health risks for bisexual individuals (Jorm et al., 2002).

The results of Balsam et al. (2005) challenge Jorm et al.'s (2002) theory that bisexuals would demonstrate greater levels of psychological distress. Balsam et al. did not find a significant difference in the level of psychological distress among the sexual minorities. The authors believe these unanticipated findings may be a result of recruiting participants via sexual minority organizations, which may have resulted in a psychologically healthy group of bisexuals who have sought out the support of the bisexual community and may not be comparable to the general population. In the study conducted by Koh and Ross (2006), bisexual women were twice as likely as lesbian women to have reported having an eating disorder were. More research evaluating the impact of prejudice on the mental health of bisexual individuals is needed.

Unique Characteristics and Challenges of the Bisexual Community

According to APA's latest Guidelines for Psychological Practice with Lesbian, Gay, and Bisexual Clients, it is psychologists' professional responsibility to understand the unique bias experienced by bisexual individuals (APA, 2012). Even though great strides have been made for the progress of lesbian women and gay men, bisexual men and women are often overlooked in research and their very existence is questioned in both the heterosexual, lesbian, and gay communities (Cervone, 2005; Garnets, 2002; Ochs, 2009, 2011). Bisexual issues require special attention, as bisexual women and men experience unique developmental issues and combat different negative stereotypes than other sexual minority groups (Bradford, 2006; Fox, 2006; Herek, 2002; Ochs, 2011). This final portion of the literature review on sexual minorities will review three topics unique to bisexuality: bisexual identity development, bivisibility, and double discrimination.

Bisexual identity development. There are relatively few studies based on theoretical and empirical approaches to bisexual identity development. Early sexual orientation identity models identified "bisexuality as a transitional period" along the path to lesbian or gay male identity (Cass, 1979, p. 67). As bisexual identity models were conceived in the 1980's, they were created based on existing measures of male homosexual identity development with childhood indicators of same-sex attraction, followed by awareness, questioning, and stability of same-sex attraction over time (Goetstouwers, 2006). Challenging this theoretical relationship, Diamond (1998)

evaluated the application of traditional coming out models to the sexual histories of 89 sexual minority women. Using qualitative analysis, Diamond discovered that less than 30 percent of the self-identified bisexual and lesbian women's coming out experiences fit the traditional male model. It became imperative for researchers to develop an identity model that fit the unique experiences of bisexual identity development for women.

Three of the most prevalent bisexual identity models will be reviewed here: Weinberg, Williams, and Pryor (1995), Brown (2002), and Bradford (2004). All three of the bisexual identity models are very similar in terms of stage development and will be evaluated concurrently. The first stage of bisexual development is referred to as *initial confusion* by Weinberg et al. (1995) and Brown (2002), and called this stage *questioning reality* in Bradford's model (2004). In this first stage of identity development, bisexual individuals may begin to experience anxiety in relation to their new found feelings for individuals of both the same- and other-sex. The anxiety is likely related to fears of rejection of peers, experience incongruence with their dichotomized view of sexuality, and confusion related to experiencing bisexual feelings in a monosexual culture.

Weinberg et al. (1995) and Brown (2002) refer to the second stage of bisexual identity development as *finding and applying the label*. The bisexual person must discover that bisexuality does exist as a sexual identity and be able to apply that label to her or his experiences. Bradford (2004) called this stage *inventing reality*, alluding to the fact that identity in this stage may be created by the bisexual individual. This terminology reflects the understanding that the bisexual label is stigmatized in both

heterosexual and non-heterosexual communities. It is important that the person discovers or creates this label in the context of identity affirmation, a challenging task.

The third stage of bisexual identity development is referred to as *settling into the identity* by Weinberg et al. (1995) and Brown (2002). At this stage it is important that bisexual individuals have a strong support network and access to a bisexual community. This community can be in their geographical location or virtual. Bradford (2004) refers to the third stage of bisexual identity development as *maintaining identity*. In this model, the focus is on strengthening a relationship with a bisexual community and a strengthening of the individual's identity development in the face of adversity.

The three development models diverge significantly in regards to the fourth stage of bisexual identity development. Weinberg et al. (1995) referred to this final stage as continued uncertainty, reflecting the possibility that bisexual individuals will continue to experience confusion and uncertainty throughout their life. Brown (2002) referred to the final stage of bisexual identity development as identity maintenance, acknowledging the challenges that may be faced by bisexual individuals regarding their bisexual identity, but that these challenges do not necessarily affect the stability of one's bisexual identity. Bradford (2004) entitled the final stage of bisexual identity development as *transforming adversity*. This affirmative label reflects the opportunity for bisexual individuals to transform adversity and marginalization into motivation for community leadership and social action.

In conclusion, all three bisexual identity development models reflect a four-stage process in which bisexual individuals experience anxiety and uncertainty regarding a bisexual identity, find or create the label of bisexuality to understand their experiences, then further explore the bisexual community, while gaining social support (Bradford, 2004; Brown, 2002; Weinberg et al., 1995). The final stage of bisexual identity development is either one of continued confusion, managing and maintaining their bisexual identity, or they are able to transform adversity into opportunity for social activism. A significant number of bisexual individuals have accepted and successfully integrated their bisexual identity into their lives (Bradford, 2006). However, a number of bisexual persons continue to struggle with accepting and integrating their sexual orientation as a result of heterosexism and binegativity (Ochs, 2011). Although bisexual individuals will continue to struggle with internalized binegativity throughout their life, longitudinal studies suggest that bisexual identity remains stable for a majority of self-identified bisexual persons (Diamond, 2003, 2008; Weinberg et al., 2001).

Bivisability. The existence of bisexuality psychologically threatens the traditional ways of seeing the world by challenging the dichotomous view of gender and sexuality (Ochs, 2011). "The acknowledgment of bisexual reality shines a light on the frequency with which inconsistencies occur among behavior, attraction, and self-identity, ultimately challenging some of our most cherished concepts in regard to sexual orientation" (Firestein, 2007b, pp. 108-109). In today's heterosexist society, any individual without a visible partner is assumed to be heterosexual (Ochs, 2011). Thus to

create a mark of their existence and increase people's awareness, bisexual groups have started to form their own visibility to the communities (Cervone, 2005). Becoming a visible community was one of the main goals of the post-Stonewall rights movement (D'Augelli & Garnets, 1995). Without a visible community to contest the stereotypes of sexual minorities, the stigma surrounding the community will remain unchanged and perpetuates prejudice and discrimination.

When individuals experience same-sex and other-sex attraction they may have a difficult time operationalizing sexuality as anything other than a dichotomy with only two options: gay or straight (Weinberg et al., 1995). While some bisexual individuals may experience relatively equal amounts of attraction to both sexes, others may have a significantly stronger preference of one sex over the other (Herek, Norton, Allan, & Sims, 2010). As a result, bisexual individuals may identify more with their heterosexual or homosexual population than they do with the bisexual population, reducing bivisability (Worthington & Reynolds, 2009).

Binegativity and double discrimination. Ochs (1996) described the prejudice against bisexual persons in both the heterosexual community and nonheterosexual community as "double discrimination" (p.217). To investigate Ochs' theory, Mulick and Wright (2002) developed a measure of biphobia and administered the scale to 224 undergraduate students. Almost half of the respondents in both the self-identified heterosexual group and the nonheterosexual group scored in the moderate to severe biphobic range. However, the heterosexual sample scored significantly higher than the

nonheterosexual respondents did, although the level of binegativity may have been underestimated since the sample was recruited from a lesbian, gay, and bisexual combined support group. Mulick and Wright had found a significant correlation of scores on a measure of homophobia and biphobia among heterosexuals.

There are a number of societal stereotypes about bisexuals and bisexuality that individuals in both the heterosexual and non-heterosexual communities hold. For example, some common myths are that bisexuals are promiscuous, insatiable sex-fiends, require a male and female partner at all times, are incapable of monogamy, and are not suitable for relationships (Barret & Logan, 2002; Dworkin, 2001; Ochs, 2011). However, statistics demonstrate that bisexual individuals are no more likely to cheat in relationships than any other orientation (Diamond, 2008). Other stereotypes faced by bisexual individuals include the myth bisexuals are lesbian women or gay men that have not come out of the closet or they are heterosexuals that are just experimenting (Firestein, 2007a; Fox, 2006; Klesse, 2011; Ochs, 2011). Although bisexuality is often judged as a transient orientation, a comparable 25% of bisexual women and 25% of lesbian women relinquished their identity over a 5-year period (Diamond, 2003).

Bisexual individuals who internalize binegativity are more likely to experience psychological distress and poor quality of life (Herek, 2009; Herek & Garnets, 2007). Bisexual women and men score higher on measures of internalized sexual stigma then lesbians and gay men score (D'Augelli et al., 2001; Kashubeck-West & Szymanski, 2008; Rowan, 2004). Higher levels of internalized stigma might explain the research

suggesting bisexual men and women are at an increased risk for developing mental health disorders when compared with both heterosexuals and nonheterosexuals (Jorm et al., 2002; Meyer, 2003; Paul et al., 2002; Robin et al., 2002; Udry & Chantala, 2002; Warner et al., 2004).

Attribution Theory

Attribution of causality is one potential individual differences variable that holds promise in clarifying the nature and correlates of binegativity. People's beliefs about the causality of an issue are strongly correlated with their emotional response to that situation and their willingness to help (Schmidt & Weiner, 1989; Weiner, 1985). Attribution theory has also been applied to predict how causal attributions impact prejudice against stigmatized groups and how willing a person would be to help that stigmatized person(e.g., De Jong, 1980; Juvonen, 1991, 1992; Weiner, 1993; Weiner et al., 1988; Weisman, et al., 1993). Researchers have determined that individuals who believe same-sex sexual orientation is biologically determined are more affirming of lesbians, gay men, and bisexual individuals and are more supportive of sexual minority rights (Arnesto & Weisman, 2001; Haider-Markel & Joslyn, 2005, 2008; Hegarty & Pratto, 2001; Sakalli, 2002; Swank & Raiz, 2010; Tygart, 2000; Whitley, 1990; Wood & Bartowski, 2004). At this time, no researchers have evaluated the relationship between attributions of bisexuality orientation and acceptance and binegativity.

The Origins of Attribution Theory

Attribution theory seeks to understand how a person's beliefs about the cause of an outcome influence their behavior and emotions (Weiner, 1985, 1993). As human beings, we are constantly compelled to understand the world and people around us. We always want to know why things are the way they are and why people do what they do. Often times there are no clear or concrete answers to these questions. We use the information we can gather from the environment and the knowledge we already have to draw our own conclusions. These conclusions affect the way we will feel about a situation and influence our behavior and if we are willing to take action or help (Heider, 1958; Schmidt & Weiner, 1989; Weiner, 1985, 1993). Attribution theory seeks to predict the ways in which our conclusions influence our affect and behavior. The first step to understanding how our conclusions affect our emotional response and resulting behavior is to classify these causal explanations, further referred to as attributions.

Heider (1958) describes two primary attributions of individual behavior: dispositional and internal causes or situational and external causes. Attributing behavior to a person's personality or character is an example of a dispositional attribution, whereas a situational attribution focuses on the context of the person's environment to explain the behavior. An example of a dispositional attribution would be attributing behavior or attributes to genetics. In general, when a person uses a situational attribution to interpret an individual's behavior the individual is not held to the same level of accountability as a

person whose behavior is interpreted using a situational attribution since situational attributions focus on external factors that are beyond an individual’s control.

Expanding Heider’s theory of attribution, Weiner (1979, 1985) included an additional dimension of attribution, controllability. Controllability refers to the level of control a person is perceived to have over a particular outcome. Weiner’s attribution model suggests that when an undesirable outcome is related to something that is believed to be controllable, the observer is likely to believe the individual is responsible for the outcome, resulting in a negative response toward that individual, such as anger, disgust, or resentment. However, if a negative or undesirable outcome is perceived to be uncontrollable, the observer is less likely to hold that individual responsible for that behavior or outcome, resulting in a more positive response such as pity, sympathy, or understanding. Schmidt and Weiner (1989) expanded on Weiner's (1985) theory to use attributions to predict helping behavior, as well as predicting affective responses. With helping behavior, if someone is in need of help and that person can be held responsible for her or his problem, then people are likely to feel anger and withhold assistance. However, if the perception is the person in need cannot be held responsible for her or his predicament, then people are likely to feel pity and are more likely to help that individual.

Stigma, Prejudice, and Attribution Theory

Attribution theory has also been applied to predict how causal attributions impact prejudice against stigmatized groups and how willing a person would be to help that stigmatized person. Weiner (1993) summarized the relationship between attributions of

causality and prejudiced attitudes in his theoretical paper, *On Sin Versus Sickness: A Theory of Perceived Responsibility and Social Motivation*:

> Just as is the evaluation of an achievement outcome, reactions to stigmatized persons are in part based on moral principles. Persons with controllable stigmas are construed as responsible for their conditions and are considered moral failures. This judgment gives rise to moral-based negative affects and corresponding behavioral intentions. On the other hand, stigmatized individuals with uncontrollable "marks" are not held responsible for their stigmata are considered "innocent victims." This construal elicits altruism-generating affects and positive behavior (p. 960).

Weiner's expanded theory of attribution provided an opportunity for researchers to explore how attributions of causality might influence prejudice of stigmatized groups.

Applying attribution theory to predict affective and behavioral responses to stigmatized groups, Weiner et al. (1988) examined how perceived controllability and perceived stability of the cause of stigmas related to participants' emotional reactions and their willingness to help the stigmatized individual. The authors predicted the mental-behavioral stigmas would be rated as "onset-controllable," whereas stigmas with a clear physical origin would be rated "onset-uncontrollable." These authors further hypothesized that stigmas evaluated as onset-controllable (e.g., AIDS, drug abuse, or obesity) would elicit negative emotions, such as dislike or anger, and would be less likely to elicit helping behavior. Conversely, stigmas evaluated as onset-uncontrollable (e.g.,

blindness, cancer, or heart disease) would elicit more positive emotions, such as liking or pity, and would more likely elicit helping behavior.

As Weiner and colleagues (1988) predicted, physically based stigmas were perceived as less controllable and the stigma was considered stable or irreversible. Consequently, individuals with physically based stigmas were more liked or pitied, and respondents acknowledged a greater willingness to help that individual or make a charitable donation. Conversely, mental-behavioral stigmas were viewed as controllable and these stigmas were appraised as stable, irreversible. Therefore, the individuals with mental-behavioral stigmas were blamed for their condition, evoking anger and decreasing the likelihood of help-giving behavior (Weiner et al., 1988).

Subsequent research supported Weiner et al.'s (1988) evaluation of the relationship between causal attributions and an individual's affective and behavioral responses to stigma. With mental health stigmas, several studies concluded that mental health stigma and discrimination are significantly related to the tendency of people to evaluate mental health problems as controllable and unstable, or reversible (Corrigan, 2000; Crandall & Moriarty, 1995; Menec & Perry, 1998). For example, Weisman et al. (1993) found that attribution beliefs about schizophrenia influenced family member's affective, cognitive, and behavioral reactions. Family members of individuals with schizophrenia who believed that the schizophrenia was caused by factors within the patient's control were more critical of that family member, held more negative feelings toward that person, and acknowledged they were less likely to help the afflicted family

member, than family members who believed the disease was caused by factors beyond the patient's control (Weisman et al., 1993).

Beyond mental health research, attribution theory has been applied to various stigmatized groups. For instance, Lear (1991) found that widows elicited more sympathy and helping behavior than divorced women since they were viewed as faultless in the loss of their spouse. Conversely, divorced women could be blamed for their partner loss and evoked more anger and less helping behavior than their widowed counterparts evoke. Juvonen (1991, 1992) discovered that teachers' reaction to student behavior was related to the attributions they made about the causes of their behavior. Teachers were more likely to perceive hyperactive students as responsible for their behavior, eliciting negative affect and less willingness to help on the part of the teacher. Conversely, shyness was perceived as a personality trait beyond the students control and teachers felt warmer toward the shy students and were more likely to give them attention during class. Zucker and Weiner (1993) found that when participants were told a person's poverty level was a result of things that were beyond their control, the participants were more likely to feel pity and express a willingness to help. Conversely, if the person's poverty was described as the result of the person's laziness or motivation then the participants expressed blame, anger, and an unwillingness to help (Zucker & Weiner, 1993).

Attribution theory has also been applied to the stigmatization of people who are obese. For example, DeJong (1980) found that people who are obese are evaluated more negatively when their weight problems could be attributed to self-control issues as

opposed to a psychological disorder. Crandall (1994) also found that anti-fat attitudes were significantly related to attributions of fault. Dislike and rejection of people who are obese was significantly related to the causal attribution that people are responsible for their obesity and it is something that they chose not to control. Further, Crocker, Cornwell, and Major (1993) discovered that women who were obese and believed that their condition was controllable were more likely to believe the prejudice and discrimination they faced about their stigma was warranted.

Stigma, Prejudice, and Sexual Orientation Beliefs

Causal attributions are an important component to consider while examining attitudes about same-sex sexual orientation. Some people think that sexual orientation is a choice, while others believe that sexual orientation is innate and beyond a person's control. Beliefs about the nature of sexual orientation are referred to as *sexual orientation beliefs*. Researchers in this area of attribution theory have found that individuals who believe same-sex sexual orientation is biologically determined are more affirming of lesbians, gay men, and bisexual individuals and more supportive of sexual minority rights (Arnesto & Weisman, 2001; Haider-Markel & Joslyn, 2005, 2008; Hegarty & Pratto, 2001; Sakalli, 2002; Swank & Raiz, 2010; Tygart, 2000; Whitley, 1990; Wood & Bartowski, 2004).

The implications of sexual orientation beliefs reach beyond predicting stigma and prejudice and extend as far as predicting support for civil rights. A genetic or biologically based attribution about the origins of homosexuality suggests people believe

homosexuality is not controllable. However, a belief that homosexuality is acquired through social context, learned, or personal preference suggests a belief that homosexuals can control this condition, and therefore can change their sexual orientation. If sexual orientation can be changed, then perhaps there is less of a need for public policies that protect individual orientations. (Haider-Markel & Joslyn, 2005, p. 234). The remainder of this literature review will focus on current attribution research evaluating sexual orientation beliefs, prejudice, and support for civil rights.

In a seminal study evaluating the application of attribution theory to social stigmas, Whitley (1990) investigated the relationship between controllability attributions of sexual orientation and attitudes toward lesbians and gay men. Whitley predicted that individuals who attributed the cause of homosexuality to be controllable would be more likely to have negative attitudes toward gay men and lesbians. It was further hypothesized that individuals who attributed the cause of homosexuality to be uncontrollable would be more likely to have positive attitudes toward gay men and lesbians. Participants' attitudes toward gay men and lesbians' role in society and their comfort interacting with gay people were both measured. Whitley also measured variables previously found to be related to attitudes of homosexuality, including how well the participant knew a gay man or lesbian and if the participant was the same sex as the target sex (Whitley, 1990).

Consistent with attribution theory and Whitley's (1990) hypotheses, a significant relationship was found between attributions of causality of homosexuality and attitudes

toward gay men and lesbian women. Individuals who viewed homosexuality as a choice held greater negative attitudes toward gay men and lesbians. Individuals who evaluated the causes of homosexuality to be uncontrollable held more positive attitudes about gay men and lesbian women. The nature of the relationship between attributions and attitudes was dependent on the attitude in question. For the participants' attitudes of the societal roles of gay men and lesbians, controllability attributions were the most significant predictors of attitude and explained more than 8% of the variance. However, when the participants' comfort interacting with a gay man or lesbian was measured, controllability attributions were not were not found to be as significant as other variables and only explained 3.4% of the variance in attitudes (Whitley, 1990). The degree to which a person was acquainted with a gay man or lesbian explained 7.4% of the variance. Surprisingly, the most significant predictor of comfort levels of interacting with gay men or lesbians, accounting for 10.0% of the variance, was the similarity of respondent and target sex. Male participants were significantly more comfortable interacting with lesbians than the female participants were and the female participants were significantly less comfortable interacting with gay men than the male participants. Causal attributions were the most significant predictor of attitudes toward lesbian and gay men's role in society, but were not a significant predictor of the participants' comfort interacting with sexual minorities (Whitley, 1990).

Seeking to clarify the relationship between sexual orientations and prejudice, Tygart (2000) utilized telephone interviews with 600 randomly selected adults to evaluate

their beliefs about the causes of homosexuality and their support for gay rights. In addition to assessing causal attributions, participants' political ideology, religiosity, and philosophy of free will versus determinism were also measured. Tygart's results were consistent with attribution theory, the more participants attributed sexual orientation to genetic causes, the more likely they were to support gay marriage or domestic partnerships. Similarly, participants with more deterministic views and more liberal political ideologies of the world were more supportive of gay rights. Although participants whose religion was important to them and participants who attended services more frequently were less likely to support civil rights for sexual minorities, religiosity was not a significant predictor of support for gay rights at the multivariate level of analysis. In other words, when all the variables were analyzed simultaneously religiosity did not explain any additional variance in the participants' level of support for civil rights for sexual minorities (Tygart, 2000).

Hegarty and Pratto (2001) were interested in understanding how a person's perceptions of sexual orientation were related to attitudes toward sexual minorities. Beliefs about the immutability and fundamentality of sexual orientation were evaluated. Immutability describes how mutable, or rigid, sexual orientation was believe to be across the lifespan. Fundamentality reflects "the belief that persons can be classified as homosexual and heterosexual and that there are fundamental psychological differences between the members of these two groups" (p.128). Hegarty and Pratto recruited 116 students from a large Ivy League university to complete a survey about their attitudes

toward lesbians and gay men for partial course credit. The packet included the Attitudes Toward Lesbians and Gay Men scale (ATLG; Herek, 1984, 1994), a set of nine statements asking participants to rate his or her level of agreement to sexual orientation belief statements about the fundamentality or immutability of sexual orientation, and a demographic questionnaire measuring the participants' level of religiosity, sex, ethnicity, and sexual orientation. A factor analysis of the responses to the sexual orientation belief statements revealed a two-factor solution that explained 44.4% of the variance, beliefs about the immutable nature of sexual orientation, and beliefs about the fundamental nature of sexual orientation. Consistent with previous research in the area of sexual orientation beliefs, the immutability factor negatively correlated with attitudes toward lesbians and gay men. In other words, the more fixed sexual orientation was believed to be across the lifespan, the more tolerant attitudes toward lesbians and gay men. Fundamentality, however, was positively correlated with attitudes about lesbians and gay men; perhaps reflecting the need for people who are more prejudiced to have distinct categories of sexual orientation (Hegarty & Pratto, 2001).

Sexual orientation beliefs have also been evaluated in hypothetical scenarios, specifically Arnesto and Weisman (2001) utilized attribution theory to predict emotional reactions of parents to the disclosure of a gay son. Three hundred and fifty-six undergraduate psychology students at a university in Boston were asked to imagine having a teenage son who has disclosed his gay sexual orientation. The participant pool consisted of predominantly Caucasian females with the average age of 24. The study

participants were given two vignettes to take home to read, and several questionnaires to complete after reading vignettes. The first vignette was a brief description of their 16-year-old imagined son. The second vignette, written as if the parent is telling the story to a friend, described their imaginary son disclosing their sexuality. The subsequent questionnaires measured the participants' attributions pertaining to the causes of sexuality, their proneness to guilt and proneness to shame, their emotional response to the vignettes, and their willingness to help their imagined child (Arnesto & Weisman, 2001).

In accordance with attribution theory, Arnesto and Weisman (2001) found perceptions of controllability were significantly related to participant's unfavorable emotional reactions and their level of reported affection toward their imaginary son. The more controllable participants rated sexual orientation the more likely they were to identify experiencing negative emotional reactions, fury, shame, anger, hatred, and frustration and the less likely they were to report feeling affection toward him. Conversely, participants who believed that their son's sexual orientation was beyond their child's control they were less likely to experience unfavorable emotional reactions and more likely to report a greater affection toward him. In terms of the participants' willingness to offer their imagined child help, guilt prone participants and participants who attributed less controllability of homosexuality were more likely to report a willingness to offer help. Arnesto and Weisman's results have significant implications for treatment approaches for parents and families with nonheterosexual children. Helping parents understand the various biological and environmental factors that contribute to

nonheterosexual orientations may help soften the family's emotional responses to the child and could increase their willingness to help their child (Arnesto & Weisman, 2001).

In an international study evaluating the relationship between sexual orientation beliefs and prejudice, Sakalli (2002) evaluated the application of the attribution-value model of prejudice to sexual minorities using a convenience sample of 307 undergraduates (117 females, 190 males) from a technical university in Turkey with ages ranging from 17 to 26 years. Crandall et al. (2001) believed cultural value plays an important role in applying attribution theory to prejudice. The attribution-value model of prejudice dictates that one must consider the cultural value of a particular trait, in addition to attributions of controllability, to completely understand the causes of prejudice. Sakalli (2002) asked the participants to complete a homonegativity scale and then asked them to rate their level of agreement or disagreement, using a 6-point Likert-type scale, to statements regarding the origins of sexual orientation, cultural attitudes toward sexual minorities, and their own gender and sexual orientation. To measure participants' attributions of controllability regarding sexual orientation, the author asked the participants to rate her or his level of agreement or disagreement with the statement "I believe that homosexuality is due to learning and preference and not biology and genetics" (Sakalli, 2002, p. 267). To measure the participants' perception of the cultural value of gay men and lesbians the author asked the participants to think about how Turkish society perceived homosexuality and then asked them to rate her or his level

agreement or disagreement with the statement "our society does not accept homosexuality and gay men and lesbians" (Sakalli, 2002, p. 267).

Consistent with previous sexual orientation belief studies, Sakalli (2002) confirmed that both attributions of controllability and cultural value regarding sexual orientation were related to prejudiced attitudes toward gay men and lesbians. In terms of controllability, participants who rated sexual orientation as controllable held more prejudiced attitudes toward sexual minorities, explaining 21% of the variance in attitudes toward gay men and lesbians. When cultural value of sexual minorities was added to the analysis, 39% of the variance in attitudes could be explained by the combination of their attribution of controllability and their perceived cultural value of gay men and lesbian women. Consequently, when participants believed that sexual orientation is controllable and perceive a negative cultural value their prejudice to sexual minorities significantly increased (Sakali, 2002).

In order to evaluate the influence of attribution beliefs on gay stereotyping, homonegativity, and support for gay rights, Wood and Bartowski (2004) interviewed 368 Oklahoma City residents. During the interview, participants were asked about their beliefs in gay stereotypes, their desired level of social and physical distance from gays, and how strongly they supported several issues pertaining to gay rights. Sexual orientation beliefs were measured by asking participants to select the statement that best matched their opinion about the origins of sexual orientation; “homosexuals are born with their sexual orientation,” “people become homosexual because of the way they were

brought up," and "Homosexuality is a lifestyle choice; people choose to be homosexual" (p. 63). The researchers collapsed the first two attributions into one category labeled *situational attribution styles* and the lifestyle choice was labeled *dispositional attribution styles* (Wood & Bartowski, 2004).

Wood and Bartowski's (2004) research is unique because they determined a causal order of variables using the contact hypothesis theory and previous research on stratification beliefs and the impact of those beliefs on racial opportunity programs. Utilizing this previous research, Wood and Bartkowski's study is based on the assumption that "the causal direction flows from sociodemographic factors to attribution style to both gay stereotyping and homophobia, and finally to support for gay rights" (p. 63). This flow of causality model determined their approach to the multivariate analysis of the results. As predicted by attribution theory, participants who responded with a situational attribution style (born that way or product of the environment) scored significantly lower on the gay stereotyping and homonegativity measures than participants with a dispositional attribution style. Situational respondents were also significantly more likely to support gay rights than those respondents who believe same-sex sexual orientation is a lifestyle choice (Wood & Bartowski, 2004).

During the multivariate analysis, Wood and Bartowski (2004) determined attribution style was the greatest predictor of believing gay stereotypes, and explained 44.5% of the total variance. In accordance with the causal order of variables, the researchers included gay stereotyping as a variable in the regression equation for

homonegativity. As the researchers predicted, gay stereotyping became the strongest predictor of homonegativity. However, when the authors included gay stereotyping and homonegativity into the regression equation for the support of gay rights, attribution style was the third strongest predictor of gay rights, just after homonegativity and gay stereotyping. Although the analyses of homonegativity and support for gay rights are skewed as a result of the researchers assumption of causal order, it is clear that attribution style remains the most significant independent factor in predicting the belief in gay stereotypes, the level of comfort interacting with and being in the presence of gays, and lesbians, as well as support for equal rights for sexual minorities (Wood & Bartowski, 2004).

Statistically evaluating national surveys, several studies have evaluated the relationship between sexual orientation beliefs and prejudice at the national level. Haider-Markel and Joslyn (2005) evaluated the significance of attribution of sexual orientation compared to a number of other variables including gender, race, age, socioeconomic status, religiosity, political ideology, and partisanship. The authors utilize data from a May 2004 Gallup survey of national adults, comparing how respondents answered a question about their opinion of the legalization of gay marriage and a question about what they attribute to be the origins of same-sex sexual orientation. The question about attribution was as follows, "in your view, is homosexuality something a person is born with, or is homosexuality due to factors such as upbringing and environment?" (Haider-Markel & Joslyn, 2005, p. 235). Survey participants could

choose either answers, both answers, or neither answers. Only the respondents who selected one choice were included in the study. As predicted by attribution theory, those participants who believe that homosexuality is biologically determined, that "homosexuality is something a person is born with," were significantly more likely to support marriage equality (Haider-Markel & Joslyn, 2005, p. 235). Conversely, participants who believe homosexuality to be a result of one's upbringing or environment were significantly less likely to support marriage equality. Attribution was the strongest determinant predicting the support of gay marriage, exceeding the predictive strength of race, ideology, and religiosity.

Haider-Markel and Joslyn (2008) replicated their 2005 results utilizing a 2004Pew Research Center for the People and Press Survey and a 2006 Gallup poll. Sexual orientation beliefs were measured by asking participants, “In your opinion, when a person is homosexual is it… something that people are born with, or is it something that develops because of the way people are brought up, or is it just the way some people prefer to live?.” This was immediately followed with the question, “Do you think a gay or lesbian person’s sexual orientation can be changed or cannot be changed?” (p. 295). Comparing the strength of several determinants, including education, age, religion, political ideology, and if they acknowledged having a gay acquaintance, attribution of sexual orientation was clearly the most significant determinant of affect toward lesbiansand gay men. In both the 2004 and 2006 polls, attribution was the most

predictive variable of participants' level of support of policies regarding lesbian and gay civil rights (Haider-Markel & Joslyn, 2008).

In a recent national study utilizing college students from 12 randomly selected U.S. colleges, Swank and Raiz (2010) surveyed 571 heterosexual social work students to assess the strength of multiple predictors of same-sex relationship rights. These researchers employed multivariate analysis to measure the predictive strength of several demographic, attitudinal, and contextual factors. Of the 571 heterosexual social work students surveyed, more than 75 percent of the respondents were young, Caucasian, and female. Swank and Raiz utilized a three-item same-sex relationship rights scale to measure the respondents' support of marital rights for lesbians, gay males, and bisexual individuals. The independent variables, gender role expectations, authoritarian orientation, level of religiosity, attribution of cause, friends and family's support of homosexuality, and the amount of contact with lesbians and gay men, were measured utilizing both ordinal and categorical questions from previous research. After attribution of cause, religious attendance, parental acceptance, traditional gender roles, and authoritarian worldviews, were significant predictors of student attitudes, consecutively. The five factors that were not significant predictors of attitude toward same-sex relationship rights, gender, race, age, level of education, and contact with gay men or lesbians, can be attributed to the specific population sampled for the study (Swank & Raiz, 2010).

In the only study of its type, Herek et al. (2009) collected data from 2,259 lesbian, gay, and bisexual adults in Southern California in order to evaluate self-stigma and its relationship to beliefs about one's own sexual orientation. These authors measured sexual orientation beliefs by asking the participants a single question, "How much choice do you feel that you had about being [lesbian/gay]/bisexual?" (Herek et al., 2009, p.37). Overall, bisexual participants perceived they had more choice concerning their sexual orientation than did gay and lesbian participants, and female participants believed they had more choice over their sexual orientation than did the male participants. However, the majority of the sexual minority participants believed they had little to no choice at all regarding their sexual orientation. Of the bisexual female respondents, 45% endorsed have "very little choice" or "no choice at all" regarding their sexual orientation and 20% of bisexual women indicated that they had "some choice." The range of sexual orientation beliefs was limited and no main effect for perceptions of choice could be determined. However, when the sexual minority groups were evaluated independently, a Sexual Orientation by Beliefs interaction was significant. Lesbian women and gay men who believed they had some degree of choice about their sexual orientation scored lower on a measure of internalized heterosexism (Herek et al., 2009).

Strengths and Weaknesses of Research on Attribution Theory

The emerging research on attribution theory is characterized by both strengths and weaknesses that may inform future research in this area. The multidisciplinary, cross-cultural nature of the research provides a rich base of knowledge from which to draw.

The real-world applicability is high, with potential extensions of results to education, advocacy, and therapeutic intervention. Weaknesses in the application of attribution theory to prejudice against sexual minorities must also be noted. Research in this area has frequently used small samples of college students that limit the generalizability of the studies (Arnesto & Weisman, 2001; Hegarty & Pratto, 2001; Sakalli, 2002; Swank & Raiz, 2010; Whitley, 1990). Furthermore, sexual orientation beliefs were measured differently in almost every study. Most of the research of attribution theory and sexual orientation stigma conceptualized sexual orientation beliefs dichotomously into situational or dispositional attributions. Even when the participants rated their answers along a continuum, their answers were then included into one of two groups, biologically determined or choice, or if their answers were in the middle, they were dropped from the study prior to analysis (Haider-Markel & Joslyn, 2005).

Another limitation in the literature regarding attribution theory is that it has consistently measured the beliefs of the dominant group about the non-dominant group. For example, in investigations of sexual orientation beliefs, the sexual orientation of the study participants was not reported, or non-heterosexual participants were dropped from the study before analysis (e.g., Haslam & Levy, 2006; Hegarty & Pratto, 2001). In the single study that did measure sexual orientation beliefs among sexual minority individuals (Herek et al., 2009) the authors acknowledged that the small percentage of sexual minorities who identified their sexual orientation as a choice and the lack of

respondents with significant levels of self-stigma included in their study limited their findings.

A significant limitation of research regarding sexual orientation beliefs and sexual stigma is the lack of research regarding bisexuality, specifically. The previous studies looked exclusively at sexual orientation beliefs about lesbian women and gay men (Hegarty & Pratto, 2001; Whitley, 1990), about sexual minorities in general (Haider-Markel & Joslyn, 2005; Sakalli, 2002; Tygart, 2000), or the researchers inquired more generally about gay rights or same-sex relationship rights (Swank & Raiz, 2010; Wood & Bartowski, 2004). Research has not examined the relationship of attribution theory and its related bias to the additional prejudice experienced by the smaller subsets of sexual minorities like those individuals who identify as bisexual.

Adult Attachment

Adult attachment style is another individual differences variable that holds promise in clarifying the nature and correlates of bisexual stigma. Although there are only a few studies specifically evaluating the relationship between adult attachment and homophobia among heterosexual people (Gormley & Lopez, 2010; Marsh & Brown, 2011; Schwartz & Lindley, 2005), a number of studies discovered a relationship between adult attachment and variables related to prejudice (Mikulincer, 1997; Mikulincer, 1998; Mikulincer & Horesh, 1999; Mikulincer et al., 2001; di Pentima & Toni, 2009). The literature review of adult attachment will start with the history of attachment theory, then

it will continue on to different measures and operational definitions of attachment, and then it will summarize and evaluate attachment theories application to homophobia.

History of Attachment Theory

Bowlby (1969) first introduced the term attachment to describe the long-term dynamics of interpersonal relationships between individuals that can provide an individual with a sense of security and belonging. Attachments are initially developed in infancy and are based on the emotional bonds between the infant and their primary caregiver, generally referring to the emotional attachment established between an infant and their mother (Bowbly, 1969, 1973, 1980). The person to whom the attachment is formed is known as the *attachment figure*. Research by Ainsworth, Blehar, Waters, and Wall (1978) demonstrated that children use this attachment figure as a *secure base* from which to explore the world around them. When children are securely attached, they feel safe enough to explore new environments while checking to ensure that their secure base is still there to run back to if needed. The desire for proximity to attachment figures becomes especially relevant in times of high stress (Sable, 2008). When a child returns back to the attachment figure for comfort after experiencing fear or anxiety, the attachment figure is referred to as a *safe haven* (Ainsworth & Bowlby, 1991; Bowlby, 1988).

Bowlby believed that the early bonds between a child and their caregivers have a significant impact on an individual’s mental and physical well-being (Bowlby, 1969, 1973, 1980). Secure attachment is fostered by caregivers who are responsive to their

child's emotional and physical needs, is emotionally available, and is able to regulate their own positive and negative emotions. Attachments function to insure the development of dependable relationships that provide psychological and physical protection, emotional stability, and eventually, reproductive success. Individuals who have a sense of a secure base are better able to maintain their own well-being, regulate their affective responses, report high self-esteem, develop positive models of the self and others, and are more self-reliant than individuals with an insecure base (Mikulincer, 1998; Mikulincer & Horesh, 1999; Sable, 2008).

Bowlby posited that the stability of an individual's attachment continued to be impacted by those early bonds or attachments throughout the life span (1973, 1980). Bowlby believed that early attachments provided mental representations of an individual's identity in relation to others referred to as *internal working models* (Bowlby, 1973). Over time, children internalize experiences with attachment figures to form a prototype for later significant relationships (Sable, 2008). *These working models of attachment* are applied to situations when safety, security, and close relationships become most important (Bowlby, 1988). These models give a child a sense of self and others, eventually leading to the development of one's adult personality.

Although Bowlby characterized attachment as a lifelong process, the concept of attachment in adulthood continues to evolve as the research in the area of adult attachment continues to grow (Sable, 2008). It is posited that adult attachments function similarly to attachments in childhood with several key differences. Adult attachment

appears to diverge from attachment in childhood in the complexity of behaviors utilized to achieve proximity to attachment figures and the diversity of attachment figures (Mikulincer & Shaver, 2001). In adulthood, attachment figures extend beyond family to include significant friendships, romantic relationships, and sexual attachments (Fraley, Heffernan, Vicary, & Brumbaugh, 2011). Although adult attachments serve the same evolutionary purposes, attachment is more subtle and less imperative as it is in childhood. Furthermore, an adult's attachments style may also be less obvious to an outside observer than children's attachment styles would be.

Adult attachment is best understood along two dimensions: attachment-related anxiety and attachment-related avoidance (Brennan, Clark, & Shaver, 1998; Fraley & Shaver, 2000). High levels of attachment anxiety are related to hyperarousal and fear of abandonment by attachment figures. High levels of attachment avoidance are related to a lack of trust in others, a lack of empathy for others, and a disconnect from one's own attachment needs. Low levels of attachment anxiety and avoidance are the determinants of a securely attached person. In terms of assessment, adult attachment is best understood as a continuous variable along two dimensions, attachment anxiety, and attachment avoidance (Fraley et al., 2011; Fraley & Shaver, 2000). Although the categorical labeling of attachment remains popular in psychology, research has demonstrated that dimensional measures of attachment are more sensitive to individual differences (Brennan et al., 1998; Fraley & Waller, 1998).

Understanding and Measuring Adult Attachment

Originally developed in 1984, the Adult Attachment Interview (AAI) is a semi-structured interview that taps into adult attachment by asking direct questions about childhood memories (George, Kaplan, & Main, 1984, 1985, 1996). The AAI established four categories of adult attachment: secure/autonomous, dismissing, preoccupied, and unresolved/disorganized. The AAI is scored according to the individual's current state of mind regarding their childhood recollections and how balanced the memories of their parents currently are. For example, a securely attached adult will not have not idealized or villainized their parents nor would they react in a defensive manner about their childhood recollections. An adult with a dismissing style would be more defensive, minimize the negatives, demonstrate memory lapses, deny the importance of their attachment to caregivers, and their positive memories would be inconsistent or conflicting. Preoccupied adults describing their childhood caregivers would be angrier, more ambivalent, and experience an ongoing fixation with their parents. The adult with unresolved/disorganized attachment demonstrate sustained trauma resulting from unresolved loss, neglect, or abuse. The use of the AAI to assess adult attachment and its established categories of adult attachment has been supported by a significant amount of research (Hesse, 1999).

Several years after the development of the AAI, Hazan and Shaver (1987) developed a self-report measure of adult attachment that focused on adult romantic attachments and assessed the quality of childhood relationships. Similar to the

attachment styles established by Ainsworth's infant attachment studies (Ainsworth et al., 1978), Hazan and Shaver's assessment measure categorized adult attachments into three categories of attachment: secure, ambivalent, and avoidant. Respondents were asked to read several sentences describing each of the three styles and then select which of the descriptions fit the way they generally acted and felt in romantic relationships. Hazan and Shaver's research on adult attachment concluded that adults with secure attachment styles tended to have happier romantic relationships and reported caring and attentive caregivers in childhood. One of the limitations of this measure of attachment is the forced choice, categorical nature of the descriptions (Mikulincer & Shaver, 2007). Categorical measures assume that there is no variation within the four groups or that the variation is of no importance and that the people within a group are alike or that the variation among group members is of no importance. Fraley and Waller's (1998) research demonstrates the idea that categorical measures cannot capture the complexities of attachment organization.

Simpson (1990) converted Hazan and Shaver's (1987) attachment-style paragraph descriptions into 13 separate proposition items that could be rated on a 7-point Likert scale. Participants were asked to rate how their level of agreement that such statements described the way that they conceptualize their romantic relationships. Simpson, Rholes, and Phillips (1996) developed the Adult Attachment Questionnaire (AAQ) and increased the number of items to 17 in order to increase the internal consistency of the attachment-related anxiety scale. In turn, they established a fourth category of attachment, fearful

attachment. Factor analyses confirmed the AAQ's four attachment-style categories loaded on a two-factor model, anxiety and avoidance, with adequate internal consistency. Simpson et al.'s research supported Hazan and Shaver (1987) research regarding adult attachment styles. More securely attached adults were happier in their romantic relationships and they reported more caring and attentive childhoods.

Bartholomew (1990) conceptualized her measure of attachment according to Bowlby's (1969, 1982) theory of internalized working models. The two factors of adult attachment, attachment-related anxiety and attachment-related avoidance, are understood in terms of the model of self and the model of others. Attachment-related anxiety is conceptualized as the model of self and attachment-related avoidance is conceptualized as the model of others. Figure 1 illustrates Bartholomew's four types of attachment styles on a grid with attachment anxiety (model of self) along the X-axis and attachment avoidance (model of others) along the Y-axis. According to Bartholomew (1990), securely attached people have positive models of their self (low anxiety) and a positive model of others (low avoidance). People with preoccupied attachment styles would have a negative model of their selves (high anxiety) but they would have a positive model of others (low avoidance). Persons with dismissing avoidant and fearfully avoidant attachment styles would both have a negative model of others (high avoidance), but would differ on their models of self. Dismissing avoidant people have a positive model of self (low anxiety) and fearfully avoidant people have a negative model of self (high anxiety).

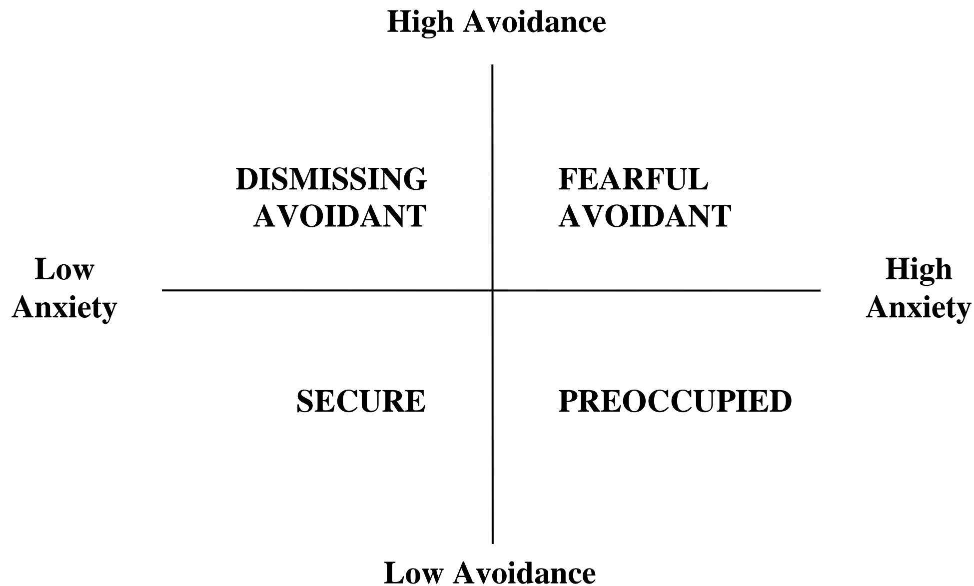

Figure 1. Bartholomew's two-dimensional attachment pattern for adults. Bartholomew's (1990) research suggested a two-dimensional attachment pattern for adults (Mikulincer & Shaver, 2007, p. 89). The two variables are labeled attachment-related anxiety and attachment-related avoidance.

One year after the publication of the four-factor theory of adult attachment, Bartholomew and Horowitz (1991) developed the Relationships Questionnaire (RQ). The RQ is a brief self-report instrument designed to assess adult attachment within the four-factor typology. Participants are asked to read the four descriptions, choose which description best matches their experiences in intimate relationships, and to rank each description based on how close they believe the statement matches their romantic attachment style. A few years later, Griffin and Bartholomew (1994) created the Relationship Styles Questionnaire (RSQ) a 30-item inventory utilizing prototypes from both Hazan and Shaver's (1987) research and the RQ. Although its length makes the

RSQ more reliable, the internal consistency of categorizing people into four groups is still low.

The Attachment Style Questionnaire (ASQ; Feeney, Noller, & Hanrahan, 1994) was formulated using Ainsworth and Bowlby's writings and worded their items with less focus on romantic attachments, making the measure suitable for those young adults who would not have as much experience in such intimate relationships. Through structure analysis, Feeney et al. limited their measure to 40 six-point Likert scale items asking participants to rate their level of agreement to statements describing close relationships. Unlike previous measures, the ASQ utilized a five-factor model of adult attachment, including lack of confidence, discomfort with closeness, need for approval from others, preoccupation with relationships, and viewing relationships as secondary (Feeney et al., 1994). However, Brennan et al. (1998) determined that those five factors could also be contextualized along the two-factor model as their factor analyses found that most of those factors loaded heavily on attachment anxiety or attachment avoidance. The ASQ continues to be used by researchers looking to evaluate specific aspects of avoidance and anxiety (Mikulincer & Shaver, 2007).

The Experiences in Close Relationships questionnaire (ECR; Brennan et al., 1998) and the Experiences in Close Relationships-Revised questionnaire (ECR-R) are two of the most popular measures of adult attachment styles. Both of these measures assess adult attachment along the same two dimensions as Bartholomew (1990), attachment-related anxiety and attachment-related avoidance. Brennan et al. (1998) have

compiled items from all of the self-report measures created by 1997 and used factor analyses to determine the items that loaded the strongest on anxiety and avoidance and also had the lowest cross loadings between the two factors. The final measure consisted of two 18-item scales, the Attachment-Related Anxiety scale and the Attachment-Related Avoidant scale. The measures have shown consistently high reliability and validity over the years and little correlation between the two scales (Mikulincer & Shaver, 2007). Although a very popular measure of adult attachment, several limitations of the original ECR were brought to light. Of the 18 items on the anxiety scale, only one item requires reverse scoring making the scale vulnerable to acquiescence response bias. Furthermore, some of the items use the singular word partner while some of the items referred to the plural word partners, potentially confusing respondents or biasing particular items (Mikulincer & Shaver, 2007).

The Experiences in Close Relationships was revised in 2000 by Fraley et al. Fraley and colleagues utilized item response theory to determine that the two scales on the ECR (Brennan et al., 1998) did not discriminate evenly across the dimensions. The ECR is less sensitive for secure attachment styles and was less discriminate measuring lower scores of anxiety and avoidance. Fraley et al. revised the ECR by replacing several items with items from Brennan et al.'s (1998) original item pool. Reliability and stability of the ECR-R were comparable to the ECR. Factor analyses revealed a similar two-factor structure to the original ECR, however the anxiety and avoidance were slightly but not significantly correlated with each other.

The Relationship Structures questionnaire of the Experiences in Close Relationships Questionnaire (ERC-RC; Fraley et al., 2011) was designed to measure adult attachment across four separate significant attachment relationships: mother or mother-like figure, father or father-like figure, romantic partner, and best friend. For each of the four relational dimensions participants were asked to indicate the extent to which they agree or disagree with nine items measuring attachment-related anxiety and attachment-related avoidance. Scoring of the ECR-RS was designed to compare scores across the four relational domains in terms of attachment-related avoidance and anxiety. Alternatively, a global attachment anxiety score and a global attachment avoidance score can be assessed by averaging the four attachment anxiety scores and then averaging the attachment avoidance scores.

Attachment-Style Differences in Openness to Experience

In the earliest studies of attachment-style differences, emotional response and information processing were associated with differences in attachment. Bowlby (1963, 1973) discovered that fear regulation, especially fear reactions to unfamiliar people, is regulated by attachment security. Less secure children were fearful of unfamiliar people and places. Those children who had a sense of a secure base were more likely to explore novel situations and more likely to engage in risk-taking behavior (Bowlby, 1988). Similar patterns were evaluated by Moss, Gosselin, Parent, Rousseau, and Dumont (1997). In Moss et al.'s study, participants who were securely attached held more positive attitudes toward novelty, they had more tolerance for things that were not

familiar, and they had better interactions with strangers than those participants who were insecurely attached.

Contemporary attachment research has demonstrated a significant relationship between differences in adult attachment and several factors that are related to prejudice, including differences in information processing (Mikulincer, 1997), willingness to explore the unfamiliar (Bowlby, 1988), perception of others (Mikulincer & Horesh, 1999), affect regulation (Bowlby, 1969, 1973; Mikulincer, 1998), empathic responses (Mikulincer et al., 2001; Mikulincer & Shaver, 2001), and political ideology (Koleva & Rip, 2009). People who scored low on attachment anxiety and attachment avoidance were more likely to open their cognitive structures to new information and integrate new information into their judgments than those people who scored higher on attachment anxiety and attachment avoidance (Mikulincer, 1997). Overall, these studies concluded that individuals who have a secure base (low attachment-related anxiety and low attachment-related avoidance) were more willing to explore new places, things, concepts, and people than individuals with high attachment-related anxiety and avoidance.

Mikulincer and Shaver (2001) examined the relationship between adult attachment style and intergroup bias across five studies utilizing undergraduate students in Israel. Intergroup bias refers to the tendency of members of an in-group to perceive members of an out-group as different and having qualities that are less desirable Individuals with more secure attachment styles reacted more positively toward out-group targets than those with insecure attachment styles. In each of their studies, Mikulincer

and Shaver evaluated how priming participants' secure base influenced their reactions to information that threatened their worldview. Participants in the primed secure base groups were more open to new information, even when this information threatened their worldview and it was coming from a member of the out-group. The authors suggest that priming a secure base activated positive self-representations and resulted in positive reactions to individuals from ethnically different groups. When the secure base is primed, individuals had significantly more positive reactions to out-groups (Mikulincer & Shaver, 2001).

Blatant prejudice is no longer socially appropriate and more subtle prejudice is being noticed by researchers. An Italian study assessed the relationship between attachment style and two levels of prejudice, subtle and blatant, among high school students aged 13 to 19 years old (diPentima & Toni, 2009). The participants included 144 female and 54 male high school students of mixed ethnicity and social class. As hypothesized, adolescents with secure attachment styles demonstrated the lowest levels of blatant and subtle prejudice. In terms of subtle prejudice, adolescents with ambivalent, avoidant, and disorganized attachment styles demonstrated higher levels of subtle prejudice than those securely attached adults. Furthermore, adolescents with an avoidant attachment style demonstrated the highest levels of blatant prejudice. Those individuals with an avoidant attachment style (low attachment-related anxiety and low attachment-related avoidance) would be less concerned about social norms or what others thought of their behavior (diPentima & Toni, 2009).

One recent study evaluated the relationship between adult attachment styles and authoritarian attitudes among Midwestern college students (Gormley & Lopez, 2010). Authoritarian attitudes include concepts such as right-wing authoritarianism, homophobia, and ethnocentrism. Homophobia was the only concept variable found to have a relationship with attachment style. Data revealed a gender by attachment-style interaction effect on their levels of homophobia. Among men, those participants with higher levels of attachment avoidance also scored higher on homophobia. Among female participants, those with dismissing attachments were the least homophobic group. Gender variables moderated the relationship between homophobia and attachment styles (Gormley & Lopez, 2010).

Marsh and Brown (2011) found a Gender by Attachment interaction effect in the relationship between attachment style and homophobia. The online study evaluated the relationship between religiosity, nationalism, and attachment style among undergraduate college students mainly from Australia and the United States. Those female participants who scored higher on religiosity and higher on attachment avoidance were significantly more homophobic than those securely attached participants. Attachment anxiety was significantly related to homonegativity among those male respondents who scored high on religiosity (Marsh & Brown, 2011).

One study that evaluated the relationship between attachment, religious fundamentality, and homophobia determined that adult attachment was not related to homophobia (Schwartz & Lindley, 2005). These authors used a sample of 198 students

from a Southern university. Over 90% of the participants indicated they were Christian. Furthermore, the sample's average scores on a measure of religious fundamentalism were closer to the average of scores of the Fundamentalist Christian group than the general Christian group. A hierarchical regression analysis revealed that attachment style was not predictive of homophobia and did not moderate the relationship between religious fundamentalism and homophobia as predicted. There are two significant limitations to this study that may explain the lack of relationship with adult attachment (Schwartz & Lindley, 2005). First, the sample was homogenous due to the high number of Christian participants and the high level of fundamentalism measured within the group. Second, Schwartz and Lindley chose to use a categorical measure of adult attachment. Older research demonstrates that the use of a dimensional measure of attachment is more sensitive to individual differences (Brennan et al., 1998; Fraley et al., 2000).

Only a limited amount of research has been published regarding the relationship between adult attachment styles and prejudice against sexual minorities and their findings have been mixed (di Pentima & Toni, 2009; Gormley & Lopez, 2010; Marsh & Brown, 2011; Schwartz & Lindley, 2005). More research is needed to understand the complex relationship between adult attachment styles and prejudice, especially its relationship to homophic attitudes.

Summary and Statement of the Problem

Research in the area of sexual minorities' mental health suggests that bisexual men and women are at an increased risk for developing mental health disorders when

compared with both heterosexuals and nonheterosexuals (Jorm et al., 2002; Meyer, 2003; Paul et al., 2002; Robin et al., 2002; Udry & Chantala, 2002; Warner et al., 2004). There are several risk factors that put bisexual individuals at risk for developing mental health problems. Heterosexism and binegativity permeate American culture (Obradors-Campos, 2011; Sullivan, 2003; Thomas, 2011; Weiss, 2003). Bisexual individuals also experience dual discrimination from both heterosexual communities and lesbian/gay communities (Mulick & Wright, 2002; Ochs, 2009). The subsequent denial of bisexuality as a true sexual orientation and the lack of a visible bisexual community have a negative impact on the quality of life for bisexual women and men (Bradford, 2004, 2006; Firestein, 1996, 2007a, 2007b; Fox, 2006; Herek, 2002; Ochs, 2009, 2011). It is imperative that mental health professionals understand the factors that create and maintain the sexual stigma that is negatively affecting the quality of life for sexual minorities.

The needs of bisexual women and men are subsumed under larger discussions of sexual minority issues and are often misunderstood as a result of being included under the umbrella of LGB (Ryan et al., 2000). Research focusing exclusively on the experiences of individuals who identify as bisexual is required in order to capture the unique experiences and discrimination they may endure (Balsam & Mohr, 2007; Klein, 1995). "The examination of the discrimination of bisexual individuals might lead to a better understanding of this prejudice and fear. This knowledge could result in a reduction in victimization, improved identity development process, and in overall improved living environment for bisexual individuals" (Mulick & Wright, 2002).

In this current study, we will utilize the concept of controllability from Weiner's (1985, 1993) attribution theory and attachment-related anxiety and avoidance from attachment theory (Bowlby, 1969, 1973, 1980) to increase our understanding of binegativity and attitudes toward bisexuality. Causal attributions are an important component to consider while examining attitudes about same-sex sexual orientation. Attribution theorists have found that individuals who believe same-sex sexual orientation is biologically determined are more affirming of lesbians, gay men, and bisexual individuals and more supportive of sexual minority rights (Arnesto & Weisman, 2001; Haider-Markel & Joslyn, 2005, 2008; Hegarty & Pratto, 2001; Sakalli, 2002; Swank & Raiz, 2010; Tygart, 2000; Whitley, 1990; Wood & Bartowski, 2004).

Another variable that holds promise in clarifying the nature and correlates of binegativity is adult attachment style. Although a very small amount of research has demonstrated a relationship between adult attachment style and homonegativity (Gormley & Lopez, 2010; Marsh & Brown, 2011; Sherry, 2007; Wang et al., 2010), research has demonstrated significant attachment-style differences in areas related to prejudice. Attachment -style differences have been perceived in information processing (Mikulincer, 1997), affect regulation (Mikulincer, 1998), perception of others (Mikulincer & Horesh, 1999), empathic responses (Mikulincer et al., 2001), and the level of acceptance of out-groups (di Pentima & Toni, 2009; Gormley & Lopez, 2010; Marsh & Brown, 2011; Mikulincer & Shaver, 2001). Understanding the relationship between

adult attachment style and binegativity may help understand more about the individual characteristics of prejudice.

Research Questions and Hypotheses

It is imperative for mental health professionals to understand the factors that create and maintain the sexual stigma that negatively impact the quality of life for sexual minorities. Research focusing exclusively on the experiences of individuals who identify as bisexual is required in order to capture the unique experiences and discrimination they may endure (Balsam & Mohr, 2007; Klein, 1995). Previous research has indicated a number of variables related to homonegativity may also be related to predictors of binegativity. More affirming attitudes and lower rates of heterosexism have been found among females, Caucasians, younger respondents, and respondents with more collegiate experience (Haider-Markel & Joslyn, 2005; Lewis, 2003). Previous research also identified several contextual factors related to attitudes toward same-sex sexual orientation, including the beliefs of their friends and family (Herek, 2002; Scholz, 2002), and the amount of contact the individual has had with sexual minorities (Herek, 2003; Wood & Bartowsky, 2004). Our study is interested in two other factors related to bisexual stigma: attribution of causality and adult attachment style.

Hypothesis one. It is hypothesized that attachment-related anxiety and attachment-related avoidance will be significant predictors of biphobia score and attitudes regarding bisexuality. Higher levels of attachment-related anxiety and avoidance will predict higher levels of biphobia and less positive attitudes regarding bisexuality. It is

further hypothesized that attachment-related avoidance will be a stronger predictor of binegativity than attachment-related anxiety.

Hypothesis two. It is hypothesized that attributions of bisexual orientation will be a significant predictor of binegativity. Specifically, attribution of bisexual orientation to personal choice will predict higher levels of biphobia and negative attitudes toward bisexuality. Conversely, attribution of bisexuality to biological or environmental causes will predict lower levels of biphobia and more positive attitudes regarding bisexuality.

Hypothesis three. It is hypothesized that attribution of bisexual orientation will be the strongest predictor of biphobia and attitudes regarding bisexuality when compared to attachment-related anxiety and attachment-related avoidance.

CHAPTER III

METHODOLOGY

Participants

The main form of recruitment consisted of placing ads on a popular social networking site (Facebook.com) that specifically targeted individuals who met the desired qualifications of the study. The text of the advertisement read, "Answer questions about your opinion of bisexuality. Enter to win a $50 VISA gift card." According to the advertising campaign page on Facebook, the advertisements were displayed on 1,648,792 Facebook users' page and each user saw the advertisement an average of 2.9 times. The advertisements resulted in 1,038 clicks directing the participants to the research study's web page. At the completion of the study, utilizing a snowballing sampling method, participants were also asked to share the research study via their personal email or on their Facebook wall. No data is available for the number of participants who went on to advertise the study independently.

A total of 653 individuals participated in this study, however because of the need to exclude participants under the age of 18, nonheterosexual participants, and those participants with excessive missing data, only the data from 365 individuals were used for analysis purposes. Participants were required to be 18 years of age and older to participate in the current study. Five participants were removed from data analysis because they were under 18 years of age. Because the focus of this research is to

evaluate potential predictors of biphobia among a heterosexual population, 171 nonheterosexual individual responses were removed from analyses. A majority of the nonheterosexual respondents identified as bisexual (*n* = 106), the remaining nonheterosexual respondents identified as lesbian (*n* = 19), gay (*n* = 11), or other (*n* = 35). Of those participants who chose to self-identify as another sexual orientation, nine participants identified as queer, eight participants as pansexual, six participants identified as bicurious or heteroflexible, five as asexual or non-sexual, four chose not to identify with a label, and three participants identified with multiple sexual orientation labels. One participant wrote that he "self-identified as bisexual in early adolescence, then bicurious, now tragically heterosexual," clearly demonstrating the complexities of labeling sexual orientation.

Of the remaining 365 individuals, the mean age of participants was 34.30 years old (*SD* = 11.17) and a range of 18-82. In terms of the highest level of education completed, the sample was significantly more educated than the general population. In the current study, 73.8% (*n* = 268) of the sample held at least a 4-year college degree. The Census Bureau's 2011 Current Population Survey reported 30.4% of people over age 25 in the United States held at least a bachelor's degree (U.S. Census Bureau, 2011). The breakdown of the highest education completed is provided in Table 1 along with the frequency distributions for the remaining demographic variables.

Table 1

Descriptive Statistics for Gender, Education, Income, and Ethnicity

		Frequency	Percent
Gender			
	Woman	287	78.6
	Man	76	20.8
Highest Level of Education	No H.S. Diploma	2	.5
	H.S. Diploma/GED	44	12.1
	2-Year Degree	49	13.4
	4-Year Degree	136	37.3
	Master's Degree	100	27.4
	Doctorate	32	8.8
Income			
	$0-$20,000	48	13.2
	$20,001-$40,000	63	17.3
	$40,001-$60,000	82	22.5
	$60,001-$80,000	59	16.2
	$80,001-$100,000	40	11.0
	Over $100,000	72	19.7
Ethnicity			
	African American	11	3.0
	Asian American	3	1.6
	Hispanic	21	5.8
	White	312	85.5
	Biracial/Multiethnic	13	3.6
	Other	4	1.2

Note: Data not adding up to a total of 100 are reflective of missing data.

Procedure

All procedures were reviewed and approved by the Institutional Review Board of the principal investigator's affiliated university. Participants were recruited through an advertisement or post on Facebook requesting that they participate in a study evaluating attitudes regarding bisexuality. A short note briefly introduced the study and a link routing participants to the PsychData website was provided. When participants logged onto the PsychData site, they were provided with the informed consent statement (Appendix A) and a list of mental health resources (Appendix B). The informed consent page included the eligibility requirements to participate in the study, the purpose of the study, potential benefits and risks, and the right of participant termination. At the end of the informed consent page, participants were asked to click on the “Continue” button to indicate their consent to participate in this study. The list of mental health resources was provided again at the completion of the study for interested participants.

Participation remained anonymous and participants’ responses were in no way linked to participant identification. Participants who wished to be entered into the drawing to win one of two $50 Visa gift cards or wanted a copy of the study results were asked to provide their contact information. The opportunity to enter the drawing to win a $50 gift card was used as compensation for participants’ time and as a recruitment method for participation. To protect participant confidentiality participants were provided a link redirecting them to a different PsychData location so contact information was stored separately from the survey.

Measures

Study participants were asked to complete several psychometric measures in order to evaluate several variables of interest, including: (a) the Demographics Questionnaire, which was used to collect demographic information (Appendix C), (b) the Unidimensional Relationship Closeness Scale (URCS; Dibble, Levine, & Park, 2011, Appendix D), which was used to evaluate relationship closeness between the respondent and a person who is bisexual, (c) a measure of causal attributions created by the primary researcher, which was used to evaluate sexual orientation beliefs (Appendix E), (d) the Relationship Structures Questionnaire of the Experiences in Close Relationships (ECR-RC; Fraley et al., 2011, Appendix F), which was used as a measure of attachment, and (e) two measures of binegativity were also included. The two measures used to evaluate levels of binegativity were the Biphobia Scale (BS; Mulick & Wright, 2002; Appendix G), a measure of thoughts and behaviors regarding bisexuality, and the Attitudes Regarding Bisexuality Scale – Female/Male Form (ARBS-F /M; Mohr & Rochlen, 1999, Appendix H), a measure of attitudes about bisexuality.

Demographics Questionnaire

The Demographics Questionnaire (Appendix C) was created by the primary researcher for the purposes of this study. The demographic questionnaire consisted of 11 questions that asked questions about the participants' age, gender, sexual orientation, ethnic background, and their year in school. Descriptive data has been included in Table 1.

One item used to measure participants' level of prior contact with bisexual individuals was also included in the demographics questionnaire. The item read, "If you know any bisexual individuals, what is their relationship to you? Select all that apply." Participants who knew at least one person who identified as bisexual were asked to complete a brief scale about their relationship with the bisexual person with whom they felt the closest. If they did not know anyone who identified as bisexual, then they were directed to the Beliefs about Causality of Sexual Orientation portion of the study.

Unidimensional Relationship Closeness Scale

The Unidimensional Relationship Closeness Scale (URCS; Dibble et al., 2011; Appendix D) was a 12-item self-report measure used to assess the relationship closeness between two persons along a seven-point Likert-type scale. The directions asked the respondent to consider the bisexual person to whom they felt the closest when responding to each item. Item response average totals indicated the level of meaningful relationship closeness on a scale from 1 to 7. Lower scores indicated a lack of relationship closeness and higher scores indicated meaningfully significant relationship closeness.

The URCS was developed to be the first unidimensional measure of relationship closeness (Dibble et al., 2011). At the time the URCS was being developed, two other multidimensional measures of relationship closeness were frequently used in research: the Relationship Closeness Inventory (RCI; Bersheid et al., 1989) and the Inclusion of Other in the Self Scale (IOS; Aaron, Aaron, & Smollan, 1992). The URCS was developed to build upon those current measures, and remained consistent with the

conceptualization of closeness, while shortening the measure, and overcoming the psychometric limitations of the previous measures.

The reliability and validity of the URCS were assessed with four data sets providing replications with four different types of relationships: college dating couples (n= 192), female friends and strangers (n= 330), friends (n= 170), and family members (n= 155; Dibble et al., 2011). The results showed that the scale was unidimensional, with high reliability across relationship types (α = .96). Evidence consistent with validity included substantial within-couple agreement for the romantic couples (intraclass correlation = .41), substantial friend–stranger discrimination for the female friends (η^2 = 2.82), and measurement invariance across relationship types. Evidence of convergent and divergent validity was obtained for Inclusion of Other in the Self Scale (IOS) and relational satisfaction.The URCS again correlated highly with relational satisfaction in the family (r = .82) and friends data (r = .63). For the current study, excellent reliability was found across relationship types (α = .97). See Table 2 for more descriptive data.

Beliefs about Causality of Sexual Orientation

The Beliefs about Causality of Sexual Orientation (Appendix E) was developed by the primary researcher to measure the level of controllability of sexual orientation attributed to lesbian women, gay men, and bisexual individuals. Similar to the single-item measured used by Sakalli (2002), respondents were asked to rate their level of agreement to statements regarding the controllability of homosexuality and bisexuality on a six-point Likert scale. Similar to previous research regarding attributions of sexual

orientation (Haider-Markel & Joslyn, 2005, 2008; Wood & Bartowski, 2004), three items were created for each group (gay/lesbian and bisexual) to measure the respondents' level of agreement that sexual orientation is a matter of personal choice, a result of biological determinism, or a result of the environment in which a person was raised. For example, the two statements "I believe that biology (e.g., genes, hormones) determines whether a person is gay or lesbian" and "I believe that the environment in which a person was raised determines whether they are gay or lesbian" evaluated the respondents' attributions of controllability of homosexuality to situational forces. The statement "I believe being bisexual is a personal choice" evaluated the respondents' attributions of controllability of bisexuality to dispositional forces. The reliability analyses with Cronbach's alpha for the Causality of Sexual Orientation-Lesbian/Gay scale and Causality of Sexual Orientation-Bisexual indicated the reliability of these two scales was very poor ($\alpha = -.22$; $\alpha = -.01$).

Experiences in Close Relationships - Relationship Structures

The Relationship Structures questionnaire of the Experiences in Close Relationships Questionnaire (ERC-RC; Fraley et al., 2011; Appendix F) was a 26-item self-report measure of attachment style across significant attachment relationships: mother or mother-like figure attachments, father or father-like figure attachments, romantic partner attachments, and best friend attachments. For each of the four relational dimensions, participants were asked to indicate on a seven-point Likert scale the extent to which they agree (1 = *Strongly Disagree* and 7 = *Strongly Agree*) with nine items measuring attachment-related avoidance (items 1-6) and attachment-related anxiety

(items 7-9). Higher scores on these scales indicated elevated levels of attachment avoidance or attachment anxiety.

Attachment-related avoidance referred to the level of comfort people have depending on people and opening up to others. "It helps to turn to this person in a time of need" was an example of an item tapping into attachment avoidance. Items five and six of the attachment-related avoidance scale were reversed scored. Attachment-related anxiety referred to the level at which people worry about the availability and responsiveness of an attachment figure. An example of an item that examines attachment anxiety was, "I worry that this person won't care about me as much as I care about him or her" (Fraley et al., 2011).

The ERC-RC was an adaptation of the Experiences in Close Relationships - Revised (ECR-R; Fraley, Waller, & Brennan, 2000), a well-researched attachment inventory utilized to assess two fundamental attachment patterns: attachment-related anxiety and attachment-related avoidance. Scoring on the ECR-RC was designed to compare scores across the four relational domains in terms of attachment-related avoidance and anxiety. Alternatively, a composite score can be assessed by summing the scores across the four relational domains to determine a global attachment-related anxiety scale and a global attachment-related avoidance scale.

During scale development, the total number of items from the original ECR-R was reduced from 36 items to ten items by eliminating questions that related specifically to romantic relationships and then by using factor analysis to determine the strongest

items for the two factors underlying attachment patterns (Fraley et al., 2011). The one item that loaded heavily on both anxiety and avoidance was also eliminated. The remaining nine items were applied to each of the four attachment relationships creating the 36-item ECR-RC. The first six items of the ECR-RS evaluate attachment-related avoidance and the last three items measured attachment-related anxiety. Utilizing an online sample of over 21,000 individuals, statistics determined that the ECR-RS scores were reliable and factor analyses revealed a two-factor structure similar to the ECR-R. In terms of the reliability of each relational domain score, alpha reliability coefficients ranged from an alpha of .87 for attachment avoidance in the romantic partner domain to an alpha of .92 for attachment avoidance in the mother domain. In terms of reliability of the composite scores, the alpha reliability estimates were $\alpha = .88$ for attachment anxiety and $\alpha = .85$ for attachment avoidance. For the current study, good reliability was revealed for ECR-Anxiety ($\alpha = .86$) and ECR-Avoidance ($\alpha = .90$). See Table 2 for more descriptive data.

The ECR-RS's convergent and divergent validity was evaluated using 338 participants currently married or in a relationship (Fraley et al., 2011). The romantic partner relational dimension on the ECR-RS was significantly correlated with the dimensions of the ECR-R for attachment anxiety ($r = .66$) and for attachment avoidance ($r = .56$). Validity was further supported with ECR-RS scores in the partner dimension and measures of relationship functioning. For example, ECR-RS attachment avoidance scores on the romantic partner dimension were negatively correlated with commitment (*r*

= -.53), satisfaction (r = -.49), and investment (r = -.28). Conversely, ECR-RS avoidance scores on the partner dimension were positively correlated with the desirability of alternative partners (r = .38).

Test-retest validity was evaluated using a test-retest correlation matrix for attachment anxiety and attachment avoidance within each relationship domain for two groups (Fraley et al., 2011). The first group was evaluated daily for one month and group two was evaluated weekly for a year. Empirical continuity functions were higher overall for parental dimensions than they were for romantic partner dimensions, demonstrating that romantic attachment styles are more malleable than attachment to parental ones. In the 30-day analysis, a majority of the test-retest correlations were above a .60 for attachment-related avoidance and a .50 for attachment-related anxiety. Over 365 days, only the test-retest correlations of the parental dimensions of attachment avoidance were above a .60.

Biphobia Scale

The Biphobia Scale (Mulick & Wright, 2002; Appendix G) was a self-report measure that consisted of 30 items designed to evaluate negative beliefs, emotions, and behaviors regarding bisexuality and bisexual women and men. The 30 scale items allowed respondents to rate their level of agreement to a series of statements regarding bisexuality on a six-point Likert scale. The scale ranged from one, meaning *strongly agree* with the statement, and six, meaning *strongly disagree* with the statement. For example, to evaluate negative beliefs about bisexuality respondents were asked to rate

how strongly they agree or disagree with the statement: "Bisexual people want to have sex with everybody." "I avoid bisexual people" was an example of an item tapping into negative behaviors concerning bisexual people. An example of an item that evaluated negative affect regarding bisexuality was, "I get anxious when I have to interact with bisexual people."

The items initially selected for the Biphobia Scale were chosen based on previous research in the area of bisexuality and biphobia (Eliason, 1997; Klein, 1993; Rust, 1993), other measures of prejudice and homonegativity (Hudson & Ricketts, 1980; Wright, Adams, & Bernat, 1999), and from professionals specializing in prejudice and discrimination relating to sexual minorities. A 40-item version of the scale was administered to 415 undergraduate students and ten items were removed via factor analysis (Mulick & Wright, 2002). The remaining 30 items were administered to 224 undergraduates to assess the measure's reliability and validity. In terms of reliability, an overall alpha reliability coefficient of $\alpha = .94$ and a one-week test-retest reliability of $r = .93$ were determined (Mulick & Wright, 2002). For the current study, excellent reliability was revealed for the Biphobia Scale ($\alpha = .94$). See Table 2 for more descriptive data.

Concurrent validity of the Biphobia Scale was evaluated by comparing participant responses on the Biphobia Scale to their scores on the Homophobia Scale (Wright et al., 1999). The Homophobia Scale was a 25-item scale evaluating the negative cognitive, affective, and behavioral responses to sexual minorities. A significant positive

correlation was found between the Biphobia Scale and the Homophobia Scale with an overall Pearson product moment correlation of $r = .83$, $p < .001$ (Mulick & Wright, 2002). Although the Biphobia Scale was developed to tap into three separate constructs (cognitions, affect, and behavior), factor analysis revealed a single factor solution that accounted for 38% of the variance (Mulick & Wright, 2002). The authors believed the one- factor solution to be the result of bisexual individuals not being identifiable while in same-gender relationships and the scales failure to differentiate between bisexual women and bisexual men.

When scoring the Biphobia Scale (Mulick & Wright, 2002), 23 of the 30 items must be reverse scored. These items were written in the negative direction and the numerical response must first be subtracted from six before totaling the sum of the responses. After reverse scoring, the numerical scores of the 30 items were totaled to determine a sum score that ranges from zero to 180. Numerical scores were then categorized as mild biphobia in the range of zero to 30, moderate biphobia scores between 31 and 75, and scores greater than 75 were labeled as severe biphobia.

Attitudes Regarding Bisexuality Scale - Female Form and Male Form

The Attitudes Regarding Bisexuality Scale - Female Form and Male Form (ARBS-F & ARBS-M; Mohr & Rochlen, 1999; Appendix H) was a 24-item self-report measure utilized in the measurement of attitudes regarding bisexuality and toward bisexual women (12 items) and men (12 items). Respondents were asked to honestly rate

their level of agreement to several statements regarding bisexuality on a five-point Likert scale ranging from one (*strongly disagree*) to five (*strongly agree*).

The items initially selected for the ARBS were chosen to fit one of three attitude domains regarding bisexuality as based on the authors' thorough literature review of bisexuality and current measures of attitudes regarding lesbian women and gay men (Mohr & Rochlen, 1999). The first domain included attitudes regarding moral tolerance for bisexuality, the second domain assessed attitudes about the legitimacy of bisexuality as a sexual orientation, and the third domain included attitudes regarding the reliability of bisexual individuals. Forty-six items were initially chosen and two forms of each item were created to relate attitudes toward bisexual women and attitudes toward bisexual men. Content validity was assessed by four graduate students familiar with sexual minority literature to indicate content areas that may have been missed, and a pilot measure was tested on nine undergraduate students to clarify wording. Six items were dropped from the measure and some of the other items were reworded for clarity.

The remaining 80 items were administered to 1,184 participants from five samples of both lesbian/gay and heterosexual college students to assess the measures reliability and validity (Mohr & Rochlen, 1999). Factor analyses revealed a two-factor solution in which legitimacy and reliability were combined under the umbrella of Stability. The two factors, Stability and Tolerance, accounted for 39% and 17% of the variance, respectively. Tolerance related to how tolerable and affirming a person believed bisexuality was as a sexual orientation. "Male bisexuality is *not* a perversion"

was an example of an item tapping into the tolerance subscale for bisexual men and would be reverse scored. Stability related to how stable or legitimate a person believed bisexuality was an authentic sexual orientation. An example of an item tapping into stability for bisexual women was "Just like homosexuality and heterosexuality, bisexuality is a stable sexual orientation for women." The ARBS-F and ARBS-M were developed based on the factor loading of paired items. Item pairs that loaded greater than .40 on a single factor were included in the final measure. Twenty-four items were included in the final measure, 12 items per scale (Mohr & Rochlen, 1999).

The 24 items included in ARBS-F and ARBS-M were categorized as Stability-F, Stability-M, Tolerance-F, and Tolerance-M for the purposes of determining reliability and validity (Mohr & Rochlen, 1999). In terms of reliability, the subscales all demonstrated high internal consistency estimates: Stability-F, $\alpha = .89$; Stability-M, $\alpha = .90$; Tolerance-F, $\alpha = .86$; and Tolerance-M, $\alpha = .83$. Adequate test-retest reliability was determined over a three-week period, resulting in the following adjusted correlation coefficients: Stability-F, $r = .69$; Stability-M, $r = .85$; Tolerance-F, $r = .92$; and Tolerance-M, $r = .83$. For the current study, poor reliability was revealed for both Attitudes toward Bisexuality - Tolerance ($\alpha = .09$) and Attitudes toward Bisexuality - Stability ($\alpha = .12$). See Table 2 for more descriptive data.

Concurrent validity of the ARBS-F and the ARBS-M was evaluated by comparing participant responses on the ARBS subscales to their responses on the short form of the Attitudes Toward Lesbians and Gay Men (ATLG; Herek, 1994). The ATLG

is a 10-item self-report measure assessing the attitudes of heterosexual men and women toward lesbian women and gay men. A significant positive correlation was found between the ATLG and the ARBS. There was a significantly stronger association between the subscale Tolerance and ATLG scores (Tolerance-F, r = .85; Tolerance-M, r = .87; p= .004) than there was between Stability and ATLG scores (Stability-F, r = .46; Stability-M, r = .49; p= .004). Concurrent validity was also determined by significant correlations with demographic variables that have been previously associated with attitudes toward sexual minorities, including gender, race, religious attendance, political affiliation, and prior contact with sexual minorities.

When scoring the Attitudes Regarding Bisexuality Scale - Female Form and Male Form (ARBS-F & ARBS-M; Mohr & Rochlen, 1999), each form was calculated separately for statistical analysis and then added together for a total score. The total Stability score for each form was the average score of six items (items 1, 3, 5, 7, 9, and 11), items 1, 3, 5, 7, and 9 were reverse scored, for a score ranging from one to five. The total Tolerance score for each form was the average score of six items (items 2, 4, 6, 8, 10, and 12), items 4, 6, 8, 10, and 12 were reverse scored, for a score ranging from one to five. Tolerance scores and Stability scores were then averaged between the Male Form and Female Form to determine a total score for Tolerance and Stability across genders.

Table 2

Descriptive Statistics and Internal Consistency Reliabilities for Scales and Subscales

	Scale Range						
Measure	Minimum	Maximum	*M*	*SD*	α	Skewness	Kurtosis
URCS	1.00	7.00	3.71	1.73	.97	.26	-.94
CSO-LG	1.00	6.00	3.91	.87	-.22	-.82	.61
CSO-B	1.00	6.00	3.63	.96	-.01	-.54	-.17
ECR-RS							
Anxiety	1.00	5.58	1.84	.91	.86	-.61	.22
Avoidance	1.00	6.45	2.55	.94	.90	1.47	2.07
BS	0.00	86.00	13.22	17.79	.94	2.03	3.80
ARBS							
Tolerance	1.00	5.00	4.39	.97	.09	-1.85	2.48
Stability	1.00	5.00	3.97	.9	.12	-.91	.21

Note: URCS = Unidimensional Relationship Closeness Scale; CSO-LG = Causality of Sexual Orientation-Lesbian/Gay; CSO-B = Causality of Sexual Orientation-Bisexual; ECR-RS = Experiences in Close Relationships - Relationship Structures; BS = Biphobia Scale; ARBS = Attitudes Regarding Bisexuality Scale; Tolerance = Overall Tolerance; Stability = Overall Stability.

CHAPTER IV

RESULTS

The current study was designed to evaluate predictors of prejudice against bisexual women and men among heterosexuals. Specifically, this study evaluated the impact of attributions of causality to bisexuality and adult attachment style on an individual's level of binegativity. This study was developed to gain a deeper understanding of the variables that predict prejudice against sexual minorities, especially negative attitudes about bisexuality and bisexual individuals. To aid in this understanding, several scales were used, specifically, the measure of Causality of Sexual Orientation for Lesbian/Gay and Bisexual orientations was created by the primary researcher (CSO-LG & CSO-B), the Unidimensional Relationship Closeness Scale (URCS; Dibble et al., 2011), Experiences in Close Relationships - Relationship Structures (ECR-RS; Fraley et al., 2011), Attitudes Regarding Bisexual Scale (ARBS; Mohr & Rochlen, 1999), and the Biphobia Scale (BS; Mulick & Wright, 2002). The results of this study are presented in the following chapter, where the preliminary analyses are reviewed first, followed by the hypotheses.

Preliminary Statistical Analyses

Preliminary Data Screening

Before conducting the data analyses, the data set was reviewed for missing data. Participants who completed at least 80% of the items on a scale were included in the

analyses to avoid losing too many participants. Data screening procedures were used to assess outliers and normality of distributions (i.e., mean, standard deviation, skewness, & kurtosis).

Preliminary Analyses

To examine the relationship between the various scales, it was necessary to conduct a correlational analysis between each of the scores. Due to the skewness of some of the measures (e.g., Biphobia scale), a Spearman rho correlation was conducted. As with a Pearson Product Moment correlation, the correlation coefficient may range from -1.00 to +1.00. Values of -1.00 indicate a perfect negative linear relationship whereas values of +1.00 indicate a perfect positive linear relationship. Values of 0 indicate a random relationship, that is, no relationship between the variables. Negative relationships occur when increases in one variable (e.g., global anxiety) are associated with decreases in another variable (e.g., biphobia). On the other hand, positive relationships occur when increases in one variable (e.g., global avoidance) are associated with increases in another variable (e.g., global anxiety).

As seen in Table 3, URCS scores were significantly and positively related to Causality of Sexual Orientation-Lesbian/Gay scores, Causality of Sexual Orientation-Bisexual scores, overall tolerance scores, and overall stability scores, indicating that participants who have higher URCS scores tended to have higher Causality of Sexual Orientation-Lesbian/Gay scores, Causality of Sexual Orientation-Bisexuality scores, overall tolerance scores, and overall stability scores. Furthermore, URCS scores were

significantly and negatively related to participants' biphobia scores (ρ = -.26, p < .001), indicating that participants with higher URCS scores tended to have lower biphobia scores.

Table 3

Spearman Rho Correlations of the Measures Utilized in the Study

		1	2	3	4	5	6	7
1	URCS							
2	CSO-LG Average	.13*						
3	CSO-B Average	.24**	.76**					
4	Global Anxiety	.05	-.06	-.06				
5	Global Avoidance	.01	-.13*	-.12*	.57**			
6	Biphobia	-.26**	-.41**	-.46**	.10*	.15**		
7	Overall Tolerance	.20**	.35**	.44**	-.03	-.04	-.69**	
8	Overall Stability	.27**	.26**	.47**	-.01	.02	-.63**	.66**

Note: **p*< .05; ***p*< .01. 1 = URCS (Unidimensional Relationship Closeness Scale); 2 = CSO-L/G (Causality of Sexual Orientation-Lesbian/Gay); 3 = CSO-B (Causality of Sexual Orientation-Bisexual); 4 = Global Anxiety; 5 = Global Avoidance; 6 = Biphobia Scale; 7 = Overall Tolerance; 8 = Overall Stability

As also shown in Table 3, Causality of Sexual Orientation-Lesbian/Gay scores were significantly and positively related to Causality of Sexual Orientation-Bisexual scores, overall tolerance scores, and overall stability scores, indicating that participants with higher Causality of Sexual Orientation-Lesbian/Gay scores tended to have higher Causality of Sexual Orientation-Bisexual scores, overall tolerance scores, and overall

stability scores. Causality of Sexual Orientation-Lesbian/Gay scores were significantly and negatively related to ECR global avoidance scores and biphobia scores, indicating that participants with higher Causality of Sexual Orientation-Lesbian/Gay scores tended to have lower ECR global avoidance scores and biphobia scores.

Additionally, as seen in Table 3, Causality of Sexual Orientation-Bisexual scores were significantly and positively related to overall tolerance and overall stability scores, indicating that participants with higher Causality of Sexual Orientation-Bisexual scores tended to have higher overall tolerance and overall stability scores. Causality of Sexual Orientation-Bisexual scores were also significantly and negatively related to global avoidance scores and biphobia scores, indicating that participants with higher Causality of Sexual Orientation-Bisexual scores tended to have lower global avoidance and biphobia scores. Further, global anxiety was significantly and positively related to global avoidance scores and biphobia scores. More specifically, global avoidance scores were significantly positively related to biphobia scores ($\rho = .15$, $p = .004$), indicating that participants with higher global avoidance scores tended to have higher biphobia scores.

Furthermore, as seen in Table 3, participants' biphobia scores were significantly and negatively related to overall tolerance scores and overall stability scores. Participants' overall tolerance scores were significantly and positively related to their overall stability scores ($\rho = .657$, $p < .001$), indicating that participants with higher overall tolerance scores tended to have higher overall stability scores. Finally, overall stability was significantly and positively related to URCS scores, Causality of Sexual

Orientation scores, and overall tolerance scores. Overall stability was also significantly negatively related to biphobia scores ($\rho = -.629$, $p < .001$).

Analysis of Hypotheses

The three hypotheses in this study examined the relationship between attributions of causality to bisexuality, adult attachment style, and binegativity. Results from the analysis are presented in this section.

Hypothesis One

It was hypothesized that attachment-related anxiety and attachment-related avoidance would be significant predictors of biphobia scores and attitudes toward bisexuality. This hypothesis was not supported by the research findings. Due to distribution issues with the biphobia scale, that is, a majority of participants were classified as being mildly biphobic and only a few participants were classified as either moderately or severely biphobic. A multinomial regression was conducted to predict biphobia categories rather than biphobia scores. The reason that a multinomial regression was conducted, instead of a multiple regression, is that a Shapiro-Wilks test determined there was severe skewness of the variable for biphobia. Most ($n = 316$) participants were classified as mild biphobia, only 45 were moderate and four were classified as severe biphobia. Classifications were created based on the Biphobia scale's recommendations. Furthermore, because of distribution problems with ECR global anxiety and ECR global avoidance, those scores were split into a high versus low score for each. The split for ECR global avoidance and anxiety was split based on High versus Low. Those who were

in the lower half of the scores were classified as Low and those who were in the top 50% of the scores were classified as High. Again, there was severe skewness for these variables and they could not be used as a continuous variable. Global anxiety and global avoidance high versus low scores were then used as predictors of biphobia categories in the multinomial regression.

As seen in Table 4, the overall multinomial regression model predicting biphobia category was not significant, $X^2(4) = 3.86$, $p = .43$, *pseudo* $R^2 = .02$. Furthermore, a deeper examination of results revealed that neither global avoidance high versus low scores nor global anxiety high versus low scores were significant predictors of biphobia categories.

Table 4

Multinomial Regression Predicting Biphobic Categories from Global Avoidance and Global Anxiety Scores

				Odds		95% CI	
	B	SE	Wald	*Ratio*	*p*	*LL*	*UL*
Moderate Biphobia[a]							
Low Global Avoidance[1]	-.42	.43	.95	.66	.33	.28	1.53
Low Global Anxiety[2]	.16	.68	.05	1.17	.82	.31	4.45
Severe Biphobia[a]							
Low Global Avoidance[1]	-1.53	1.12	1.87	.22	.17	.02	1.95
Low Global Anxiety[2]	-.79	1.31	.36	.46	.55	.04	5.94

Note: Multinomial Regression Model: X^2 (4) = 13.86, $p = .426$, *pseudo* $R^2 = .018$. [a] The reference category is Mild Biphobia. 1 = compared to High Global Avoidance; 2 = High Global Anxiety

Multiple logistic regressions were used to predict attitudes toward bisexuality, particularly tolerance and stability. Global stability and global tolerance displayed skewness; therefore, these two variables were split into a high versus low tolerance scores and a high versus low stability scores to be used as outcome measures. As shown in Table 5, the overall model predicting high versus low global tolerance scores from high versus low anxiety scores and high versus low avoidance scores was not significant, $X^2(2) = 1.79$, $p = .41$, *pseudo* $R^2 = .01$. Furthermore, the predictor variables (i.e., global anxiety and global tolerance) were not significant. Finally, the overall model predicting high versus low global stability scores from high versus low anxiety scores and high versus low avoidance scores was not significant, $X^2(2) = 2.75$, $p = .25$, *pseudo* $R^2 = .01$ (see Table 6). The predictor variables of high versus low global anxiety scores and high versus low global avoidance scores were also not significant.

Table 5

Multiple Logistic Regression Predicting High Tolerance Scores from Global Avoidance and Global Anxiety Scores

				Odds		95% CI	
	B	SE	Wald	*Ratio*	*p*	Lower	Upper
High Global Avoidance[1]	-.32	.42	.57	.73	.45	.32	1.67
High Global Anxiety[2]	-.46	.57	.64	.63	.42	.21	1.94

Note: Multiple Logistic Regression Model Predicting High Global Tolerance, compared to Low Global Tolerance: X^2 (2) = 1.79, $p = .409$, *pseudo* $R^2 = .009$. 1 = Low Global Avoidance; 2 = Low Global Anxiety

Table 6

Multiple Logistic Regression Predicting High Global Stability Scores from Global Avoidance and Global Anxiety Scores

	B	SE	Wald	*Odds Ratio*	*p*	95% CI Lower	95% CI Upper
High Global Avoidance[1]	-.17	.40	.19	.84	.67	.39	1.83
High Global Anxiety[2]	-.71	.51	1.92	.49	.17	.18	1.34

Note: Multiple Logistic Regression Model Predicting High Global Stability, compared to Low Global Stability: X^2 (2) = 2.75, p = .253, *pseudo* R^2 = .013. 1 = Low Global Avoidance; 2 = Low Global Anxiety.

Hypothesis Two

It was also hypothesized that attributions of bisexual orientation would be a significant predictor of binegativity, as measured by the biphobia scale and attitudes toward bisexuality. This hypothesis was partially supported by the data; however, findings should be evaluated carefully because of the low reliability of the Causality of Sexual Orientation measure. As with the first hypothesis, analyses included a multinomial regression and separate logistic regressions. As stated above, the reason that a multinomial regression was conducted to predict biphobia is that there was severe skewness of the variable for biphobia. As seen in Table 7, the overall multinomial regression model predicting biphobia categories from Causality of Sexual Orientation scores was significant, $X^2(4) = 40.80$, $p < .001$, *pseudo* R^2= .19. Furthermore, Causality of Sexual Orientation-Bisexuality scores was a significant predictor of moderate biphobia

(*Odds Ratio* = .47, p = .002), indicating that participants who had higher attributions of bisexuality scores had lesser odds of being moderately biphobic. Causality of Sexual Orientation-Lesbian/Gay was not, however, a significant predictor of moderate biphobia category (*Odds Ratio* = .71, p = .16). Finally, neither attribution score was a significant predictor of severe biphobia.

Table 7

Multinomial Regression Predicting Biphobia Category from Causality of Sexual Orientation-Lesbian/Gay and Causality of Sexual Orientation-Bisexual Scores

				Odds		95% CI	
	B	SE	Wald	*Ratio*	*p*	Lower	Upper
Moderate Biphobia[a]							
Average CSO-LG Score	-.35	.25	1.99	.71	.16	.44	1.15
Average CSO-B Score	-.76	.25	9.52	.47	<.01	.29	.76
Severe Biphobia[a]							
Average CSO-LG Score	-.53	.87	.37	.59	.54	.11	3.26
Average CSO-B Score	-.65	.91	.51	.52	.47	.09	3.09

Note: Multinomial Regression Model Predicting Biphobia Category (Mild, Moderate, Severe): $X^2(4) = 40.80$, $p< .001$, *pseudo* $R^2 = .187$. [a] The reference category is Mild Biphobia. CSO-LG= Causality of Sexual Orientation-Lesbian/Gay; CSO-B= Causality of Sexual Orientation-Bisexual.

The overall model predicting high versus low tolerance scores was also significant, $X^2(2) = 48.15$, $p < .001$, *pseudo* $R^2 = .23$. As seen in Table 8, Causality of

Sexual Orientation- scores was a significant predictor of high versus low global tolerance scores (*Odds Ratio* = 2.11, p = .006), indicating that participants with higher attributions of Lesbian/Gay scores had greater odds of being high in their overall tolerance scores. Causality of Sexual Orientation-Bisexual was not a significant predictor of high versus low global tolerance scores (*Odds Ratio* = 1.66, p = .057). A separate multiple logistic regression analysis was conducted to predict high versus low stability scores from causality scores. A multiple logistic regression was conducted here because the stability and tolerance scores were also skewed and could not be used as continuous scores due to the severity of the skewness.

Table 8

Multiple Logistic Regression Predicting High Global Tolerance Scores from Causality of Sexual Orientation-Lesbian/Gay and Causality of Sexual Orientation-Bisexual Scores

				Odds		95% CI	
	B	SE	Wald	*Ratio*	*p*	Lower	Upper
Average CSO-LG Score	.74	.27	7.54	2.11	.006	1.24	3.58
Average CSO-B Score	.51	.27	3.62	1.66	.057	.99	2.81

Note: Multiple Logistic Regression Model Predicting High Global Tolerance Compared to Low Global Tolerance: X^2 (2) = 48.15, p< .001, *pseudo* R^2= .233. CSO-LGBLG = Causality of Sexual Orientation-Lesbian/Gay; CSO-B= Causality of Sexual Orientation-Bisexual.

As shown in Table 9, the overall model was significant, $X^2(2) = 47.11$, $p < .001$, *pseudo* R^2= .21. A deeper examination of the results revealed that Causality of Sexual Orientation-Bisexuality scores was a significant predictor of these stability scores (*Odds*

Ratio = 3.32, $p < .001$), indicating participants with higher bisexuality attribution scores had greater odds of having high stability scores. Causality of Sexual Orientation-Lesbian/Gay scores was not, however, a significant predictor of high versus low global stability scores, *Odds Ratio* = .76, $p = .21$.

Table 9

Multiple Logistic Regression Predicting High Global Stability Scores from Causality of Sexual Orientation-Lesbian/Gay and Causality of Sexual Orientation-Bisexual Scores

				Odds		95% CI	
	B	SE	Wald	*Ratio*	*p*	Lower	Upper
Average CSO-LG Score	-.27	.22	1.58	.76	.20	.50	1.16
Average CSO-B Score	1.20	.22	28.88	3.32	<.001	2.14	5.14

Note: Multiple Logistic Regression Model Predicting High Global Stability Compared to Low Global Stability: X^2 (2) = 47.11, $p < .001$, *pseudo* R^2 = .207. CSO-LG= Causality of Sexual Orientation-Lesbian/Gay; CSO-B= Causality of Sexual Orientation-Bisexual.

Hypothesis Three

It was also hypothesized that attribution of bisexual orientation was the stronger predictor of biphobia and attitudes regarding bisexuality when compared to attachment-related anxiety and attachment-related avoidance. The data partially supports this hypothesis. To predict scores on the biphobia scale, a multinomial regression was conducted using attribution scores (i.e., lesbian/gay and bisexuality) as well as high versus low global avoidance scores. For this model, high versus low global anxiety scores could not be used as a predictor because of low sample sizes across cases. As

shown in Table 10, the overall model predicting biphobia category was significant, $X^2(6) = 41.09$, $p < .001$, *pseudo* $R^2 = .19$. A deeper examination of the results revealed that attribution of bisexuality was a signification predictor, specifically that those with higher attribution scores toward bisexuality had lesser odds of being moderately biphobic (*Odds Ratio* = .47, $p = .002$). Attributions toward lesbians/gays and high versus low global avoidance scores were not significant predictors.

Table 10

Multinomial Regression Predicting Biphobia Category from Global Avoidance Scores, Causality of Sexual Orientation-Lesbian/Gay and Causality of Sexual Orientation-Bisexual Scores

	B	SE	Wald	*Odds Ratio*	*p*	95% CI Lower	95% CI Upper
Moderate Biphobia[a]							
Average CSO-LG Scores	-.35	.25	2.01	.70	.16	.43	1.14
Average CSO-B Scores	-.77	.25	9.59	.47	.002	.29	.76
Low Global Avoidance[1]	.13	.45	.08	1.14	.77	.48	2.73
Severe Biphobia[a]							
Average CSO-LG Scores	-.51	.87	.35	.60	.56	.11	3.30
Average CSO-B Scores	-.61	.91	.45	.55	.50	.09	3.24
Low Global Avoidance[1]	-.57	1.28	.20	.57	.66	.05	6.97

Note: Multinomial Regression ModelPredicting Biphobia Category (Mild, Moderate, Severe): $X^2(6) = 41.09$, $p< .001$, *pseudo* $R^2 = .189$. [a] The reference category is Mild Biphobia. CSO-LG= Causality of Sexual Orientation-Lesbian/Gay; CSO-B= Causality of Sexual Orientation-Bisexual; 1 = Compared to High Global Avoidance.

Separate stepwise multiple logistic regressions were conducted to predict high versus low overall tolerance and higher versus low overall stability scores by global avoidance, global anxiety, and attributions scores. As mentioned above, the global tolerance and stability scores were so skewed that using them as continuous variables for linear regressions would have been inappropriate. Stepwise regressions were conducted based on the wording of the hypothesis such that attribution of bisexuality would be the stronger predictor when compared to ECR scores. Therefore, the ECR scores were entered into the first block and attribution in the second block to see if attribution was the stronger predictor when compared to ECR scores.

As shown in Table 11, the first stepwise logistic regression model predicting high versus low tolerance scores from avoidance and anxiety scores was not significant, $X^2(2) = 1.94$, $p = .38$, *pseudo* $R^2 = .01$. Furthermore, high versus low avoidance and anxiety scores were not significant predictors. The second stepwise logistic regression model, in which attribution scores were added to the overall model, was significant, $X^2(2) = 47.86$, $p < .001$, *pseudo* $R^2 = .24$. A deeper examination of the results revealed that Causality of Sexual Orientation-Lesbian/Gay scores was a significant predictor of high versus low global tolerance scores (*Odds Ratio* = 2.17, $p = .005$), indicating that participants with higher attributions of Causality of Sexual Orientation-Lesbian/Gay scores had greater odds of having high tolerance scores. Causality of Sexual Orientation-Bisexual scores, high versus low global avoidance scores, and high versus low global anxiety scores were not, however, significant predictors.

Table 11

Multiple Stepwise Logistic Regression Predicting High versus Low Global Tolerance Scores from Global Anxiety and Avoidance Scores, Causality of Sexual Orientation-Lesbian/Gay, and Causality of Sexual Orientation-Bisexual

				Odds		95% CI	
	B	SE	Wald	*Ratio*	*p*	*LL*	*UL*
Model 1							
High Global Avoidance[1]	-.32	.42	.57	.73	.45	.32	1.66
High Global Anxiety[2]	-.51	.57	.78	.60	.38	.20	1.85
Model 2							
High Global Avoidance[1]	.30	.48	.38	1.34	.54	.52	3.46
High Global Anxiety[2]	-.87	.66	1.72	.42	.19	.11	1.54
Average CSO-LG Score	.77	.27	8.03	2.17	.005	1.27	3.70
Average CSO-B Score	.50	.27	3.51	1.66	.06	.98	2.79

Note: Multiple Logistic Regression Model Predicting High Global Tolerance, Compared to Low Global Tolerance: Model 1: $X^2(1) = 1.94$, $p = .379$, *pseudo* $R^2 = .010$; Model 2: $X^2(2) = 47.86$, $p < .001$, *pseudo* $R^2 = .240$. 1 = Compared to Low Global Avoidance; 2 = Low Global Anxiety; CSO-LG= Causality of Sexual Orientation-Lesbian/Gay; CSO-B= Causality of Sexual Orientation-Bisexual.

As shown in Table 12, the first stepwise logistic regression model predicting high versus low tolerance scores from avoidance and anxiety scores was not significant, $X^2(2) = 3.02$, $p = .22$, *pseudo* $R^2 = .014$. High versus low global anxiety and high versus low global avoidance scores were not significant predictors of high versus low global stability scores, all *p*s non-significant. The second stepwise logistic regression model, in which attribution scores were added to the overall model, was significant, $X^2(2) = 46.90$, $p < .001$, *pseudo* $R^2 = .22$. A deeper examination of the results revealed that Causality of

Sexual Orientation-Bisexual was a significant predictor of high versus low global stability scores, *Odds Ratio* = 3.36, $p < .001$.The results indicated that participants with higher Causality of Sexual Orientation-Bisexual scores had greater odds of having high global stability scores.

Table 12

Multiple Stepwise Logistic Regression Predicting High versus Low Global Stability Scores from Global Anxiety and Avoidance Scores, Causality of Sexual Orientation-Lesbian/Gay, and Causality of Sexual Orientation-Bisexual

				Odds		95% CI	
	B	SE	Wald	*Ratio*	*p*	Lower	Upper
Model 1							
High Global Avoidance[1]	-.18	.39	.20	.84	.66	.39	1.82
High Global Anxiety[2]	-.76	.51	2.18	.47	.14	.17	1.28
Model 2							
High Global Avoidance[1]	.34	.44	.61	1.41	.44	.60	3.33
High Global Anxiety[2]	-.99	.58	2.95	.37	.09	.12	1.15
Average CSO-LG Score	-.26	.22	1.35	.77	.25	.50	1.19
Average CSO-B Score	1.21	.23	28.29	3.36	<.001	2.15	5.26

Note: Multiple Logistic Regression Model Predicting High Global Stability Compared to Low Global Stability: Model 1: $X^2(2) = 3.02$, $p = .221$, *pseudo* $R^2 = .014$; Model 2: $X^2(2) = 46.90$, $p < .001$, *pseudo* $R^2 = .219$. 1 = Compared to Low Global Avoidance; 2 = Low Global Anxiety; CSO-LG= Causality of Sexual Orientation-Lesbian/Gay; CSO-B= Causality of Sexual Orientation-Bisexual.

Post-Hoc Analyses

We were also interested in examining the predictability of knowing someone who is a bisexual with the previously mentioned predictors. As before, separate regressions

were conducted, specifically a multinomial regression was conducted to predict biphobia category and two logistic regressions were conducted to predict high versus low global tolerance and high versus low global stability. As seen in Table 13, the overall multinomial regression model predicting biphobia category was significant, $X^2(8) = 59.00$, $p < .001$, *pseudo* $R^2 = .26$. A deeper examination of the results revealed that, for moderate biphobia, knowing someone who was a bisexual was a significant predictor of biphobia, *Odds Ratio* = .22, $p < .001$. Specifically, those who knew someone who was a bisexual had lesser odds of having moderate biphobia, compared to those who did not know someone who was bisexual. Furthermore, Causality of Sexual Orientation-Bisexual was a significant predictor of biphobia category, *Odds Ratio* = .50, $p = .006$. Participants who had higher attributions of bisexuality scores had lesser odds of being moderately biphobic. Finally, there were no significant predictors of severe biphobia.

As shown in Table 14, a multiple logistic regression predicting high versus low global tolerance scores from high versus low global anxiety, high versus low global avoidance, causality of sexual orientation scores, and knowing someone who is a bisexual was significant, $X^2(5) = 62.57$, $p < .001$, *pseudo* $R^2 = .30$. A deeper examination of the results revealed that knowing someone who is a bisexual was a significant predictor, *Odds Ratio* = .28, $p < .001$. Specifically, participants who stated that they did not know someone who was a bisexual had lesser odds of having high tolerance scores, compared to those who stated that they knew someone who was a bisexual. Furthermore, Causality of Sexual Orientation-Lesbian/Gay was a significant predictor of high tolerance. As

shown in Table 14, participants with higher attribution of Lesbian/Gay scores had greater odds of having high global tolerance scores, *Odds Ratio* = 2.17, p = .005. There were no other significant predictors.

Table 13

Multinomial Regression Predicting Biphobia Category from Global Avoidance Scores, Causality of Sexual Orientation-Lesbian/Gay Causality of Sexual Orientation-Bisexuality, and Do Not Know Bisexual

	B	SE	Wald	*Odds Ratio*	*p*	95% CI Lower	95% CI Upper
Moderate Biphobia[a]							
Average CSO-LG Score	-.34	.26	1.80	.71	.18	.43	1.17
Average CSO-B Score	-.70	.26	7.43	.50	.006	.30	.82
Low Global Avoidance[1]	-.02	.44	.00	.98	.96	.41	2.32
Know Bisexual[2]	-1.50	.36	17.79	.22	<.001	.11	.45
Severe Biphobia[a]							
Average CSO-LG Score	-.51	.88	.34	.60	.56	.11	3.34
Average CSO-B Score	-.58	.91	.40	.56	.53	.10	3.34
Low Global Avoidance[1]	-.56	1.29	.18	.58	.67	.05	7.23
Know Bisexual[2]	-.56	1.25	.20	.57	.65	.05	6.64

Note: Multinomial Regression Model Biphobia Category (Mild, Moderate, Severe): $X^2(8) = 59.00$, $p < .001$, *pseudo* $R^2 = .264$. [a] The reference category is Mild Biphobia. CSO-LG= Causality of Sexual Orientation-Lesbian/Gay; CSO-B= Causality of Sexual Orientation-Bisexual. 1= Compared to High Global Avoidance; 2 = Compared to Do Not Know Bisexual.

Table 14

Multiple Logistic Regression Predicting High versus Low Global Tolerance Scores from ECR Anxiety and Avoidance Scores, Causality of Sexual Orientation-Lesbian/Gay, Causality of Sexual Orientation-Bisexual, and Do Not Know Bisexual

				Odds		95% CI	
	B	SE	Wald	*Ratio*	*p*	Lower	Upper
High Global Avoidance[1]	.16	.47	.11	1.17	.74	.46	2.95
High Global Anxiety[2]	-.82	.65	1.60	.44	.21	.12	1.57
Average CSO-LG Score	.77	.28	7.75	2.17	.005	1.26	3.74
Average CSO-B Score	.44	.27	2.62	1.56	.11	.91	2.66
Do Not Know Bisexual[3]	-1.28	.36	12.87	.28	<.001	.14	.56

Note: Multiple Logistic Regression Model Predicting High Global Tolerance, Compared to Low Global Tolerance: $X^2(5) = 62.57$, $p < .001$, *pseudo* $R^2 = .297$. 1 = Compared to Low Global Avoidance; 2 = Compared to Low Global Anxiety; 3 = Compared to Know Bisexual; CSO-LG= Causality of Sexual Orientation-Lesbian/Gay; CSO-B= Causality of Sexual Orientation-Bisexual.

Finally, a separate multiple logistic regression predicting high versus low global stability scores from global avoidance, global anxiety, causality scores, and knowing a bisexual was significant, $X^2(5) = 63.75$, $p < .001$, *pseudo* $R^2 = .27$. As shown in Table 15, the variable “did not know bisexual” was a significant predictor of high global stability scores, *Odds Ratio* = .30, $p < .001$. The results indicated that participants who stated that they did not know a bisexual, compared to those who stated that they did, had lesser odds of having high stability scores. Additionally, Causality of Sexual Orientation-Bisexual was also a significant predictor of high overall stability scores, *Odds Ratio* = 3.26, $p < .001$. Specifically, participants who had higher bisexuality attributions scores, compared

to those who had lower attributions scores, had greater odds of having high overall stability scores. The other predictors (i.e., global anxiety, global avoidance, and lesbian/gay attribution scores) were not significant predictors.

Table 15

Multiple Logistic Regression Predicting High versus Low Global Stability Scores from ECR Anxiety and Avoidance Scores, Causality of Sexual Orientation-Lesbian/Gay, Causality of Sexual Orientation-Bisexuality, and Do Not Know Bisexual

				Odds		95% CI	
	B	SE	Wald	*Ratio*	*p*	Lower	Upper
High Global Avoidance[1]	.26	.44	.35	1.30	.55	.55	3.05
High Global Anxiety[2]	-.98	.58	2.89	.38	.089	.12	1.16
Average CSO-LG Score	-.27	.23	1.71	.74	.19	.48	1.16
Average CSO-B Score	1.18	.23	25.45	3.26	<.001	2.06	5.16
Do Not Know Bisexual[3]	-1.21	.32	14.02	.30	<.001	.16	.56

Note: Multiple Logistic Regression Model Predicting High Global Stability Compared to Low Global Stability: $X^2(5) = 63.75$, $p< .001$, *pseudo* $R^2 = .274$ 1 = Compared to Low Global Avoidance; 2 = Compared to Low Global Anxiety; 3 = Compared to Know Bisexual; CSO-LG= Causality of Sexual Orientation-Lesbian/Gay; CSO-B= Causality of Sexual Orientation-Bisexual.

Summary

The results indicated that global avoidance and global anxiety scores were not significant predictors of biphobia categories, however, attributions of sexual orientation were significant predictors. Specifically, causality of sexual orientation-bisexuality was a significant predictor of moderate biphobia and high global stability scores. Furthermore, causality of sexual orientation-lesbian/gay was a significant predictor of high global

tolerance scores. Finally, knowing someone who is a bisexual predicted high global tolerance and high global stability scores.

CHAPTER V

DISCUSSION

The results and implications of this study will be discussed in this chapter. More specifically, a summary of the preliminary analyses will be followed by a description of the hypotheses and a discussion of the meaning of the results. Next, the strengths and limitations of the current study will be evaluated, directions for future research will be discussed, and implications of the study will be addressed. Finally, a summary of the study will conclude the chapter.

The purpose of the current study was to explore the relationships between attribution of controllability of sexual orientation, attachment-related anxiety, attachment-related avoidance, and binegativity among heterosexual individuals. Levels of binegativity among participants were evaluated across three variables: level of biphobia, how stable or legitimate a person believes bisexuality is as an authentic sexual orientation, and how tolerant and affirming they are towards bisexual individuals. It was hypothesized that higher levels of attachment anxiety and avoidance would predict higher levels of biphobia and attitudes regarding bisexuality. Additionally, attachment-related avoidance was expected to be a stronger predictor of binegativity. It was further hypothesized that attribution of bisexual orientation to dispositional forces (i.e., choice) would predict higher levels of biphobia and negative attitudes toward bisexuality. Conversely, attribution of bisexuality to situational forces (i.e., biological or

environmental causes) will predict lower levels of biphobia and more positive attitudes regarding bisexuality. Finally, it was hypothesized that attribution of bisexual orientation would be the strongest predictor of biphobia and attitudes regarding bisexuality.

Summary of Findings

Preliminary Analyses

Preliminary analyses were performed to observe the relationship among attribution of controllability of sexual orientation, attachment anxiety, attachment avoidance, biphobia, and attitudes regarding bisexuality. This is the first study evaluating the nature of the relationship between attribution of controllability of lesbian/gay sexual orientations and bisexuality. Preliminary analyses revealed that attribution of controllability of sexual orientation for bisexuals was significantly positively correlated and related to attribution of controllability of sexual orientation for lesbian women and gay men. Those participants who believed being a lesbian woman or gay man was primarily the result of genes or the environment were also likely to believe that being a bisexual woman or bisexual man was the result of situational forces. There continues to be no research evaluating the similarities or differences between attributions of controllability for specific groups of sexual minorities. The research questions and hypotheses for this study were evaluated for the attribution of controllability of sexual orientation for lesbian women and gay men and for the attribution of controllability of sexual orientation for bisexual individuals.

On the other hand, results indicated that participants who attributed nonheterosexual orientations to situational forces beyond that person's control (i.e., biology or environment) tended to have lower levels of biphobia, more affirming and accepting attitudes toward bisexuality, and viewed bisexuality as a more stable and legitimate sexual orientation than those participants who attributed sexual orientation to dispositional forces (i.e., controllable). This finding is consistent with previous research linking attribution of controllability to prejudice and homonegativity (Arnesto& Weisman, 2001; Haider-Markel & Joslyn, 2005, 2008; Hegarty & Pratto, 2001; Sakalli, 2002; Swank & Raiz, 2010; Tygart, 2000; Whitley, 1990; Wood & Bartowski, 2004). This study extended the application of attribution of controllability of sexual orientation, providing valid support for the link between attribution theory and binegativity. It is important for mental health professionals to understand the predictors of binegativity in order to design interventions to improve attitudes regarding bisexuality and to reduce the stigma and prejudice toward bisexual individuals.

In terms of the relationship between attributions of controllability and adult attachment, attachment-related anxiety was not related to attributions of controllability; however, attachment-related avoidance did have a significant relationship with attributions. Specifically, attribution of controllability of sexual orientation for bisexuality and for lesbian/gay orientations were significantly related to attachment-related avoidance. Participants who attributed the sexual orientation of sexual minorities to choice tended to have higher levels of attachment-related avoidance than those

participants who attributed sexual orientation to situational forces, such as genetics or environmental influences. In other words, participants who believed nonheterosexuality was a choice were more likely to have a hard time depending on people and opening up to others. This significant relationship supports previous research indicating that high levels of attachment avoidance are related to a lack of trust in others, a lack of empathy for others, and a disconnect from one's own attachment needs (Brennan et al., 1998; Fraley & Shaver, 2000).

Primary Analyses

The current study was designed to evaluate the impact of attributions of causality to bisexuality and adult attachment style on an individual’s level of binegativity. This study was developed to gain a deeper understanding of the variables that predict prejudice against sexual minorities, especially negative attitudes about bisexuality and bisexual individuals. The results of the hypotheses are provided below.

Hypothesis One. It was hypothesized that attachment-related anxiety and attachment-related avoidance would be significant predictors of biphobia scores and attitudes regarding bisexuality. This hypothesis was not supported by the data. Neither attachment-related anxiety nor attachment-related avoidance were significant predictors of binegativity. This study's data set is highly skewed towards securely attached (low anxiety, low avoidance) and these findings must be interpreted with caution due to the limited number of participants in the high anxiety and high avoidance groups. Previous research had been mixed regarding the relationship between adult attachment and

homonegativity. Schwartz and Lindley (2005) had found no relationship between attachment styles and homonegativity. In contrast, Marsh and Brown (2011) had found a significant relationship between adult attachment and homonegativity.

Hypothesis Two. The second hypothesis predicted that attribution of controllability of bisexual orientation would be a significant predictor of biphobia and attitudes regarding bisexuality. Congruent with previous attribution research about homonegativity (Arnesto& Weisman, 2001; Haider-Markel & Joslyn, 2005, 2008; Hegarty & Pratto, 2001; Sakalli, 2002; Swank & Raiz, 2010; Tygart, 2000; Whitley, 1990; Wood & Bartowski, 2004), the current study found that attribution of controllability of bisexual orientation was a significant predictor of binegativity. In other words, the type of control that a person attributes to the cause of sexual orientation predicted biphobia, the degree to which bisexuality is viewed as a legitimate, stable sexual orientation, and the degree to which bisexuality is viewed as an acceptable, morally tolerable sexual orientation.

Regression analyses revealed an interesting relationship among the binegativity variables, specifically between the two types of attitudes regarding bisexuality (stability and tolerance). In support of the second hypothesis, attribution of controllability of bisexuality was a significant predictor of biphobia and attitudes regarding the stability of bisexuality. In other words, participants who attributed being a bisexual to situational forces (i.e., genetics or environment) had greater odds of viewing bisexuality as an acceptable, morally tolerable sexual orientation, compared to those participants who

attributed lesbian and gay sexual orientations to choice. It is of interest to note that attribution of controllability of lesbian or gay sexual orientations was a significant predictor for the third type of binegativity, tolerance. Participants who attributed being a lesbian woman or gay man to situational forces (i.e., genetics or environment) had greater odds of viewing bisexuality as an acceptable, morally tolerable sexual orientation, compared to those participants who attributed lesbian and gay sexual orientations to choice. One possible explanation for attribution of lesbian and gay orientations being a significant predictor of high bisexuality tolerance is that moral views of sexual minorities may be highly correlated. In other words, the degree to which bisexuality is viewed as a morally acceptable sexual orientation may be significantly related to the degree to which lesbian and gay sexual orientations are viewed as morally acceptable. Smith, Zanotti, Axelton, and Saucier (2011) found that beliefs about bisexuality and binegativity were significantly related to beliefs about lesbians/gay men and homonegativity.

Hypothesis Three. It was further hypothesized that attribution of bisexual orientation would be the strongest predictor of biphobia and attitudes regarding bisexuality. The overall model predicting biphobia category (mild, moderate, severe) from attachment-related avoidance and avoidance, attribution of controllability of lesbian/gay orientation and attribution of bisexual orientation was significant. In accordance with previous attribution research (Haider-Markel & Joslyn, 2005, 2008; Hegarty & Pratto, 2001; Swank &Raiz, 2010; Wood &Bartowski, 2004), attribution of controllability of bisexuality was the strongest predictor of moderate biphobia.

In congruence with attribution theory, attribution of controllability of bisexuality was a significant predicator of high stability scores (Arnesto & Weisman, 2001; Haider-Markel & Joslyn, 2005, 2008; Hegarty & Pratto, 2001; Sakalli, 2002; Swank & Raiz, 2010; Tygart, 2000; Whitley, 1990; Wood & Bartowski, 2004). However, attribution of bisexuality was not a significant predictor of high tolerance scores. In other words, our hypothesis was partially supported, participants who attributed bisexuality to situational forces, such as genetics or the environment, had greater odds of viewing bisexuality as a legitimate, stable sexual orientation. Attribution of bisexuality to situational forces was not the strongest predictor of the degree to which bisexuality was viewed as an acceptable, morally tolerable sexual orientation. Interestingly, it was attribution of controllability of lesbian and gay sexual orientations that was the significant predictor of high tolerance scores. In other words, participants who attributed being lesbian or gay to genetics and the environment had greater odds of viewing bisexuality as an acceptable, morally tolerable sexual orientation, compared to those participants who attributed being lesbian or gay to choice. This may be another demonstration of how closely moral attitudes regarding bisexuality reflect the moral attitudes regarding lesbian and gay sexual orientations (Smith et al., 2011).

Secondary Analyses

The Unidimensional Relationship Closeness Scale (URCS; Dibble et al., 2011) was used to evaluate the level of closeness reported between the participant and the bisexual person to whom they felt the closest. Preliminary analyses revealed that the

URCS was significantly related to attribution of sexual orientation (lesbian /gay and bisexual) and both measures of binegativity (biphobia and attitudes regarding bisexuality). Participants who had a meaningfully significant relationship with a person who was bisexual tended to attribute bisexuality and lesbian/gay orientations to factors beyond a person's control (i.e., biology or environment), they tended to have lower levels of biphobia, and they were more likely to view bisexuality as a legitimate, stable sexual orientation that was morally tolerable. These findings are congruent with the Contact Hypothesis of prejudice (Herek, 1997). The premise of the Contact Hypothesis theory, originally known as Intergroup Contact Theory (Allport, 1954), is that interpersonal contact is one of the most effective ways to reduce prejudice between groups, especially between minority groups and majority groups (Cernat, 2011; Cunningham & Melton, 2012; West & Hewston, 2012). These findings are especially salient in designing clinical interventions to decrease binegativity. Clinical applications will be discussed later in the discussion chapter.

Similar to the findings related to the degree of relationship closeness with a bisexual person, just knowing someone who is bisexual had a significant relationship to binegativity. Data analyses revealed that for moderate biphobia, knowing someone who was bisexual was a significant predictor of biphobia scores. In congruence with the Contact Hypothesis research regarding homonegativity, those who knew someone who was bisexual had lower odds of being moderately biphobic compared to those who did not know someone who was bisexual (Cunningham & Melton; Span, 2011).

Furthermore, participants who attributed the controllability of bisexuality to situational forces had lower odds of being moderately biphobic. In terms of attitudes regarding bisexuality, those participants who stated that they knew at least one bisexual were more likely to view bisexuality as an acceptable, morally tolerable sexual orientation and as a legitimate, stable sexual orientation. Although knowing someone who is bisexual was a significant predictor of binegativity, using a measure to assess for meaningfully significant relationship closeness with that person provides richer data (Cernat, 2011).

Strengths and Limitations

In this study, a number of strengths and limitations need to be discussed. A considerable strength of this study was the data collection method. Participants were recruited via Facebook advertising. Over a million and a half Facebook users were randomly selected to become part of the participant pool from the142 million users who matched the study requirements. Casting a wide net and using random selection of potential participants increased the power and generalizability of our findings.

On the other hand, the data collection method utilized in this study was also a potential weakness. The data collected was highly skewed toward mild biphobia and securely attached styles (low attachment anxiety, low attachment avoidance). One potential explanation for the skewed data may be the wording of the advertisement. Advertisements placed on Facebook are limited to 25 characters and the advertisement for this study read as follows, "Answer questions about your opinion of bisexuality. Enter to win a $50 VISA gift card." The word bisexuality may have gained the attention

of select people, perhaps advocates of social equality or folks who identified as bisexual currently or in the past. Utilizing Facebook advertisements provided reliable data in previous research; however, those studies were looking for specific subgroups of participants (i.e., young adult substance users; Roman & Prochaska, 2012). Facebook advertising appears to be a reliable method for data collection if the keywords in the advertisement are descriptive of target participants; however, Facebook advertising may not be a reliable form of data collection for a study looking for the general population's opinion on a particular topic, especially a sensitive topic such as sexual orientation (Hadija, Barnes, & Hair, 2012). If future research is interested in learning the predictors of internalized biphobia among bisexual women and men, Facebook advertising may be an effective strategy for reaching this population.

Participant attrition was another potential limitation that may have limited the generalizabilty of the results of this research study. Of the 1,000 potential participants who clicked the advertisement and were redirected to the study's consent form, only 65% of participants started the survey and only 54% completed at least 80% of the survey and were included in the final analyses. This high level of participant attrition may have contributed to the homogenous sample that was not representative of the population as a whole. Diversity within a sample increases the generalizability and external validity of the findings (Berger, Begun, & Otto-Salaj, 2009). Because this study's participant sample is skewed (i.e., the participants are significantly more educated than the general

population, and a majority of the participants knew at least one bisexual person), the research findings must be interpreted with caution.

Another potential limitation of this study was the measure created by the researcher to measure attribution of controllability of bisexuality and lesbian/gay orientations. This measure demonstrated poor reliability and the study results must be interpreted with caution. Attribution theory research has measured causal attributions a number of different ways and there was no current measure of causal attribution that could be modified for use in this study (Arnesto & Weisman, 2001; Haider-Markel & Joslyn, 2005, 2008; Whitley, 1990). Several studies that evaluated the impact of causal attributions cited that they used a modified version of the Causal Dimension Scale (Russell, 1982); however, none of these studies provided their modifications for evaluation or replication (Arnesto & Weisman, 2001; Hegarty & Pratto, 2001; Whitley, 1990). A majority of the recent attribution research measured the impact of attribution of controllability of sexual orientation on prejudice using a single-item measure of attribution (Haider-Markel & Joslyn, 2005, 2008; Sakalli, 2002; Swank & Raiz, 2010). As a result, the researcher designed a multi-item measure of attribution because the reliability and validity of a multi-item measure is generally higher than a single-item question (Thorndike. 1967). One potential reason this measure may have demonstrated low reliability is that the three items of the measure are not tapping into the same construct. Potential construct reliability problems will be discussed further in the theoretical applications section of this discussion chapter.

An additional potential weakness of the current study was the incentives offered for participation. At the conclusion of the study participants were redirected to a page to enter their information in for a drawing to win one of two $50 Visa gift cards. Although only a small incentive was being offered in this study, some participants may have rushed through or carelessly responded to items in an effort to complete the study as quickly as possible. Future research may choose to not offer monetary incentives. A meta-analysis reviewed over 1,600 studies conducted between 2000 and 2005 revealed that the use of incentives did not affect the response rate (Baruch & Holtom, 2008)

Another significant limitation of the study was the use of self-report measures. Self-report measures are subject to bias and are not always representative of actual behavior (Donaldson & Grant-Vallone, 1992). One potential bias related to self-report measures is social desirability. Participants may have felt drawn to respond in socially appropriate ways and may not have been truthful in their responses (Edwards, 1953; Paulhus, 1991). This may be especially true on measures of prejudice, such as the biphobia scale and the attitudes regarding bisexuality, whose items have high face validity. Future research may want to include a brief measure of social desirability or a lie scale. When using self-report measures there is always a potential risk of response distortion leading to systematic biases not only of each measure, but also of the correlations between them (Spector & Brannick, 1995).

Research, Theoretical, and Clinical Implications

Research Implications

The results of this study informed the current research for bisexual research, attribution theory, and attachment theory. First, this research is unique in its focus on predictors of binegativity. Data analyses revealed that our sample scored significantly low on all measures of binegativity. Ochs (1996, 2011) believed that prejudice against bisexuals would be greater than the prejudice against lesbians and gay men. Although qualitative data shows that bisexuals experience more prejudice from the heterosexual and nonheterosexual communities (Cochran et al., 2003; Dodge & Sandfort, 2007), the current findings suggest that levels of binegativity may be lower than expected in the heterosexual population. Future research should continue to evaluate prejudice and the impact of prejudice separately for each sexual minority categories.

In terms of attribution theory, the data from this research validated the relationship between attributions of causality of sexual orientation and prejudice (Arnesto & Weisman, 2001; Haider-Markel & Joslyn, 2005, 2008; Hegarty& Pratto, 2001; Sakalli, 2002; Swank &Raiz, 2010; Tygart, 2000; Whitley, 1990; Wood & Bartowski, 2004). This study's research findings support the extension of attribution theory to evaluate prejudice against bisexual individuals. Future research should be continued in this area to evaluate the nature of this relationship among both heterosexual and nonheterosexual populations.

As this is the first study to use attribution theory to evaluate bias towards bisexuality, future research is necessary to understand the dynamics of the relationship. Future research may also want to focus on creating and testing a measure of attribution of controllability of sexual orientation. Following the example of Wood and Bartowski (2004), the items related to genetics and environment where collapsed together to create a situational forces category. After analyzing the reliability of this study's measure of attribution, it is clear that all three questions are not tapping into the same construct. In the eight years since Wood and Bartowski's (2004) study, environmental factors have been downplayed in the sexual minority identity development and more genetic research has supported the biological determinism argument for sexual orientation.

Theoretical Implications

As previously noted in the research implications section of this chapter, the results of this study inform the literature in attribution theory, contact hypothesis theory, and attachment theory. First, in terms of attribution theory, this study validates the relationship that has been consistently demonstrated between attributions of causality of sexual orientation and prejudice (Arnesto & Weisman, 2001; Haider-Markel & Joslyn, 2005, 2008; Hegarty & Pratto, 2001; Sakalli, 2002; Swank & Raiz, 2010; Tygart, 2000; Whitley, 1990; Wood & Bartowski, 2004). The purpose of this research study was to apply attribution theory to predict prejudice against bisexuality. Although a number of the research findings are limited in generalizability due to methodology issues, this study is a starting point for future binegativity research. Future research might examine the

relationships between the three components of causal attributions of bisexual orientation: the degree to which people believe bisexuality is a choice for a bisexual person, the degree to which people believe bisexuality is a result of genetics, and the degree to which people believe bisexuality is a result of the environment (i.e., the way they were raised).

The results of this study also provided support for the Contact Hypothesis (Cernat, 2011; Conley, Evett, & Devine, 2007). Participants who had a meaningful and significant relationship with a person who was bisexual tended to attribute bisexuality and lesbian/gay orientations to factors beyond a person's control, have lower levels of biphobia, and viewed bisexuality as a legitimate, stable sexual orientation that was morally acceptable. In this study participants were asked whether they knew a bisexual person or not and then were asked to complete a measure of relationship closeness. The data provided by the relationship closeness measure provided a deeper understanding of how meaningful and significant relationship closeness with a bisexual person impacted beliefs and attitudes about bisexuality (Conley et al., 2007).

Although all of the hypotheses were not supported in our findings, the study provided information about the relationship between attachment-related avoidance and measures of binegativity. Participants who attributed the sexual orientation to choice tended to have higher levels of attachment-related avoidance than those participants who attributed sexual orientation to genetics or environmental forces. These findings supported previous research indicating that high levels of attachment avoidance are related to a lack of trust in others, a lack of empathy for others, and a disconnect from

one's own attachment needs (Brennan et al., 1998; Fraley & Shaver, 2000). Mikulincer and Shaver (2001) wrote, "having a sense of being loved and surrounded by supporting others seems to allow people to open themselves up to alternative worldviews and be more accepting of people who do not belong to their own group" (p. 110). Future research may seek to understand the relationship between attachment-related anxiety and prejudice, specifically future research should seek to understand the relationship between attachment anxiety and prejudice against sexual minorities. Understanding more about the predictors of prejudice against bisexuals and other sexual minorities will help psychologists and counselors create and complete interventions designed to help reduce binegativity.

Clinical Implications

With regard to clinical practice, it is important for clinicians to understand the significant predictors of prejudice, especially prejudice against bisexuals and other sexual minorities. Counselor training should focus on evaluating and dispelling popular myths and misconceptions about bisexuality (Ochs, 2011). Therapists' negative attitudes toward bisexuality could lead to biased treatment of a client who is bisexual (APA, 2012). Research has demonstrated that counselors with negative attitudes toward bisexuality viewed their clients in a less positive light, rated them lower functioning, and were more likely to misapply bisexual stereotypes than those counselors with more positive attitudes toward bisexuality (Mohr, Israel, &Sedlecek, 2001; Mohr, Weiner, Chopp, & Wong, 2009).

Psychologists and counselors can use these study results to inform interventions designed to reduce binegativity. Interventions could range from a community-wide outreach program designed to increase the visibility of prominent role models who are bisexual to informing therapeutic work with an individual client (Moradi et al., 2009). They could help decrease a client's internalized biphobia by challenging the distorted thinking or misinformation the client may have about the origin of sexual identity. Since attributions of controllability of bisexuality are consistently the strongest predictor of negative beliefs and attitudes regarding bisexuality, it is imperative that any intervention designed towards reducing binegativity includes a portion of psychoeducation on bisexual identity development. If parents came to family counseling because they were struggling with their adolescent's disclosure of her bisexual identity, utilizing the findings of this research study, it would be important to discuss what variables have been found to relate to bisexual identity development and to process what fears they would have about having a daughter who was not heterosexual (Hegarty, 2010). Therapists can also emphasize building a secure therapeutic attachment, and positive working alliance, to assist clients in their interpersonal connections with others (Cornish, 2009). If clinicians have a better understanding of the basis of discrimination, than they are better equipped to challenge the distorted thinking or misinformation client or client families may have about the causality of sexual identity.

Relevance to the Field of Counseling Psychology

In addition to the aforementioned contributions, this study also provided relevant information to the field of Counseling Psychology. Counseling Psychologists are expected to be familiar with and follow APA's (2012) Guidelines for Psychological Practice with Lesbian, Gay, and Bisexual Clients. These guidelines ask psychologists to strive to understand the effects of stigma on lesbian, gay, and bisexual people. Counseling Psychology's definition of helping a client has extended beyond therapy services in an office to include advocating for oppressed groups as a way to foster social change (Vera & Speight, 2002). The results of this study can help inform clinical practice as well as social justice (Moradi et al., 2009). It is imperative for mental health professionals to understand the factors that create and maintain the sexual stigma that negatively impact the quality of life for sexual minorities. Interventions focused on reducing binegativity at the individual or societal level must consider exposure or imagined exposure or contact with bisexual individuals, should address the challenges of working with clients with higher levels of attachment-related avoidance, and should address common assumptions people have about bisexuality and compare those assumptions to the current research (Hegarty, 2010).

The Society of Counseling Psychologists (SCP) recently redefined the core values that characterize counseling psychology (Cornish, 2009). The revised core values included a commitment to multicultural competence, a strength-based focus, a life-span approach to human development, and an integration of practice and science. Counseling

psychologists are in a unique position of being an affirmative force and a secure base for bisexual clients seeking direction during their bisexual identity development (Bowlby, 1988; Moradi et al., 2009). Increased attention to attitudes about bisexuality may help gain valuable insight into the lives of bisexual individuals, the impact binegativity has on the psychological development of bisexual individuals, and the means by which negative attitudes can be reduced.

Conclusions

The present study explored the relationship and interactional effects of causal attribution of bisexual, lesbian, and gay sexual orientations, attachment-related avoidance and anxiety, and various types of binegativity. Future research might continue to explore the relationship between attachment-related avoidance and prejudice, specifically homonegativity and binegativity. This study expanded the current research using attribution theory to predict prejudice against sexual minorities (Arnesto & Weisman, 2001; Haider-Markel & Joslyn, 2005, 2008; Hegarty&Pratto, 2001; Sakalli, 2002; Swank &Raiz, 2010; Tygart, 2000; Whitley, 1990; Wood &Bartowski, 2004). The study provided the initial evidence that attribution theory can be used to predict several types of binegativity in a heterosexual population. An increased understanding of those variables that predict harmful beliefs about bisexuals and attitudes regarding bisexuality can inform practice (Moradi et al., 2009). For example, Counseling Psychologists may design community interventions aimed at reducing bias by educating the public about bisexual

identity development and the longitudinal data that supports bisexuality as a stable sexual orientation.

REFERENCES

Adam, B. D. (1995). *The rise of a gay and lesbian movement*(Rev. ed.). New York: Twayne Publishers.

Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the Strange Situation.* Hillsdale, NJ: Erlbaum.

Ainsworth, M. D. S., & Bowlby, J. (1991). An ethological approach to personality development. *American Psychologist, 46*(4)*,* 333-341.doi:10.1037/0003-066X.46.4.333

Allport, G. A. (1954) *The nature of prejudice.* Cambridge, MA: Perseus Books

Altemeyer, B. (2003). Why do religious fundamentalists tend to be prejudiced? *The International Journal for the Psychology of Religion, 13*, 17-28. doi:10.1207/S15327582IJPR1301

American Psychiatric Association. (1952). *Mental disorders: Diagnostic and statistical manual* (1st ed.). Washington, DC: Author.

American Psychiatric Association. (1968). *Diagnostic and statistical manual of mental disorders* (2nd ed.).Washington, DC: Author.

American Psychological Association. (2001). Guidelines for psychotherapy with lesbian, gay, and bisexual clients. *American Psychologist, 55*, 1440-1451. doi:10.1037/0003-066X.55.12.1440

American Psychological Association. (2002a). Ethical principles of psychologists and code of conduct. *American Psychologist, 57,* 1060-1073. Retrieved from www.apa.org/ethics/code2002.html

American Psychological Association. (2002b). Guidelines on multicultural education, training, research, practice, and organizational change for psychologists. Retrieved from www.apa.org/pi/multiculturalguidelines/formats.html

American Psychological Association. (2008). Resolution opposing discriminatory legislation and initiatives aimed at lesbian, gay, and bisexual persons. *American Psychologist, 63,* 428-430.doi:10.1037/0003-066X.63.5.360

American Psychological Association (2010). *Publication manual of the American Psychological Association* (6th ed.). Washington, DC: Author.

American Psychological Association (2012). Guidelines for psychological practice with lesbian, gay, and bisexual clients. *American Psychologist, 67*, 10-42. doi:10.1037/a0024659

American Psychological Association, Committee on Lesbian, Gay, and Bisexual Concerns Joint Task Force on Guidelines for Psychotherapy with Lesbian, Gay, and Bisexual Clients. (2000). *Guidelines for psychotherapy with lesbian, gay, and bisexual clients.* Washington, DC: Author. Retrieved from http://www.apa.org/pi/lgbt/guidelines.html#18

American Psychological Association, Task Force on Appropriate Therapeutic Responses to Sexual Orientation. (2009). *Report of the Task Force on Appropriate*

Therapeutic Responses to Sexual Orientation. Washington, DC: American Psychological Association. Retrieved from www.apa.org/pi/lgbc/publications/therapeutic-response.pdf

Armesto, J.C.,& Weisman, A.G. (2001). Attributions and emotional reactions to theidentity disclosure ('coming-out') of a homosexual child. *Family Process, 40*, 145-161.doi:10.1111/j.1545-5300.2001.4020100145.x

Arkenberg, J. S. (1998). *Ancient History Sourcebook: The Code of the Assura, c. 1075 BCE.* Retrieved from http://www.fordham.edu/halsall/ancient/1075assyriancode.html

Balsam, K. F., & Mohr, J. J. (2007). Adaptation to sexual orientation stigma: A comparison of bisexual and lesbian/gay adults. *Journal of Counseling Psychology, 54*, 306-319. doi:10.1037/0022-0167.54.3.306

Balsam, K. F., Rothblum, E. D., &Beauchaine, T. P. (2005). Victimization over the life span: A comparison of lesbian, gay, bisexual, and heterosexual siblings.*Journal of Consulting and Clinical Psychology, 73*, 477–487. doi: 10.1037/0022-006X.73.3.477

Barret, B. & Logan, C. (2002). *Counseling gay men and lesbians: A practice primer.* Pacific Grove, CA: Brooks/Cole Publishing Company.

Bartholomew, K. (1990). Avoidance of intimacy: An attachment perspective. *Journal of Social and Personal Relationships, 7*, 147-178.doi:10.1177/0265407590072001

Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology*, *61*, 226-244. doi:10.1037/0022-3514.61.2.226

Baruch, Y. & Holtom, B. C. (2008). Survey response rate levels and trends in organizational research. *Human Relations, 61*, 1139-1160. doi: 10.1177/0018726708094863

Berger, L. K., Begun, A. L., & Otto-Salaj, L. L. (2009). Participant recruitment in intervention research: Scientific integrity and cost-effective strategies. *International Journal of Social Research Methodology, 12,* 79-92. doi:10.1080/13645570701606077

Bostwick, W. B., Boyd, C. J., Hughes, T. L., &McCabe, S. E. (2009). Dimensions of sexual orientation and the prevalence of mood and anxiety disorders in the United States. *American Journal of Public Health, 100*,468–475. doi:10.2105/ AJPH.2008.152942

Bowlby, J. (1969). *Attachment and loss, Vol. 1: Attachment.* New York: Basic Books.

Bowlby, J. (1973). *Attachment and loss, Vol. 2: Separation.* New York: Basic Books.

Bowlby, J. (1980). *Attachment and loss, Vol. 3: Loss, sadness and depression.* New York: Basic Books.

Bowlby, J. (1988). *A secure base: Clinical applications of attachment theory.* London: Routeledge.

Bradford, M. (2004). The bisexual experience: Living in a dichotomous culture. *Journal of Bisexuality, 4,* 7-23. doi:10.1300/J159v04n01_02

Bradford, M. (2006). Affirmative psychotherapy with bisexual women. *Journal of Bisexuality, 6,* 13-25. doi:10.1037/0012-1649.44.1.5

Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult romantic attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46-76). New York: Guilford Press.

Brewster, M. E., & Moradi, B. (2010). Perceived experiences of anti-bisexual prejudice: Instrument development and evaluation. *Journal of Counseling Psychology*, *57*, 451–468. doi:10.1037/a0021116

Brown, T. (2002). A proposed model of bisexual identity development that elaborates on experiential differences of women and men. *Journal of Bisexuality, 2*, 67-92.doi:10.1300/J159v02n04_05

Bruce-Jones, E. & Itaborahy, L. P. (Eds.). (2011). *State-sponsored homophobia: A world survey of laws criminalising same-sex sexual acts between consenting adults* (4th ed.). Report of the International Lesbian, Gay, Bisexual, Trans and Intersex Association. Retrieved from http://old.ilga.org/Statehomophobia/ILGA_State_Sponsored_Homophobia_2011.pdf

Calzo, J. P., Antonucci, T. C., Mays, & Cochran, S. D. (2011). Retrospective recall of sexual orientation identity development among gay, lesbian, and bisexual adults. *Developmental Psychology, 47*, 1658-1673. doi: 10.1037/a0025508

Carroll, L. (2009). *Counseling sexual and gender minorities*. Upper Saddle River, NJ: Merrill.

Cass, V. C. (1979). Homosexual identity formation: A theoretical model. *Journal of Homosexuality, 4*, 219-35. doi:10.1300/J082v04n03_01

Cernat, V. (2011). Extended contact effects: Is exposure to positive outgroup exemplars sufficient or is interaction with ingroup members necessary? *Journal of Social Psychology, 151*, 737-753.

Cervone, D. (2005). Personality architecture: Within-person structures and processes. *Annual Review of Psychology*, *56*, 423–452.doi:10.1146/annurev.psych.56.091103.070133

Cochran, S.D. (2001). Emerging issues in research on lesbians' and gay men's mental health: Does sexual orientation really matter? *American Psychologist, 56*, 929-947.doi:10.1037/0003-066X.56.11.931

Cochran, S. D., & Mays, V. M. (2006). Estimating prevalence of mental and substance using disorders among lesbians and gay men from existing national health data. In A. Omoto & H. Kurtzman (Eds.), *Sexual orientation, mental health, and substance use: Contemporary scientific perspectives* (pp. 143-165). Washington DC: American Psychological Association.

Cochran, S.D., Sullivan, J.G. & Mays, V.M. (2003). Prevalence of mental disorders, psychological distress, and mental health services use among lesbian, gay and bisexual adults in the United States. *Journal of Consulting and Clinical Psychology, 71*, 53-61.

Cornish, J. (2009). Society of Counseling Psychology (SCP) Division 17, American Psychological Association (APA): Minutes of the Executive Board Meeting Chicago, Illinois March 4—5, 2008 Tuesday, March 4, 2008.*The Counseling Psychologist, 37*, 156-178. doi: 10.1177/0011000008328941

Corrigan, P. W. (2000). Mental health stigma as social attribution: Implications for research methods and attitude change. *Clinical Psychology: Science and Practice, 7*, 48-67. doi: 10.1093/clipsy.7.1.48

Crandall, C. S. (1994). Prejudice against fat people: Ideology and self-interest. J*ournal of Personality and Social Psychology, 66*, 882–894.doi:10.1037//0022-3514.66.5.882

Crandall, C. S., & Moriarty, D. (1995). Physical illness stigma and social rejection. *British Journal of Social Psychology, 34*, 67–83.doi:10.1111/j.2044-8309.1995.tb01049.x

Crawford, I., Allison, K. W., Zamboni, B. D., & Soto, T. (2002). The influence of dual-identity development on the psychological functioning of African-American gay and bisexual men. *The Journal of Sex Research, 39,* 179-189.doi:10.1080/00224490209552140

Crocker, J., Cornwell, B., & Major, B. (1993). The stigma of overweight: Affective consequences of attributional ambiguity. *Journal of Personality and Social Psychology, 64*, 60–70.doi:10.1037//0022-3514.64.1.60

Crowell, J. A., Fraley, R. C., & Shaver, P. R. (2008). Measurement of individual differences in adolescent and adult attachment. In Cassidy J, Shaver PR. *Handbook of Attachment: Theory, Research and Clinical Applications.* New York and London: Guilford Press. pp. 599–634.

Cunningham, G. B., & Melton, E. N. (2012). The moderating effects of contact with lesbian and gay friends on the relationships among religious fundamentalism, sexism, and sexual prejudice. *Journal of Sex Research*. doi: 10.1080/00224499.2011.648029

D'Augelli, A. R. (2002). Mental health problems among lesbian, gay, and bisexual youths ages 14 to 21. *Clinical Child Psychology and Psychiatry, 7*, 439-462.doi:10.1177/1359104502007003010

D'Augelli, A. R. (2003). Lesbian and Bisexual female youths aged 14 to 21: Developmental challenges and victimization experiences. *Journal of Lesbian Studies, 7,* 9-29. doi:10.1300/J155v07n04_02

D'Augelli, A., & Garnets, L. (1995). Lesbian, gay, and bisexual communities. In A. D'Augelli & C. Patterson (Eds.), *Lesbian, gay, and bisexual. identities over the life span: Psychological perspectives* (pp. 293-320). New York: Oxford University Press.

D'Augelli, A. R., Grossman, A. H., Hershberger, S. L. & O'Connell, T. S. (2001). Aspects of mental health among older lesbian, gay, and bisexual adults. *Aging and Mental Health, 5*, 149-158.doi:10.1177/088626001016010003

D'Augelli, A.R., Grossman, A.H., & Starks, M.T. (2005). Parents' awareness of lesbian, gay, and bisexual youths' sexual orientation. *Journal of Marriage and Family, 67*, 474-482. doi:10.1111/j.0022-2445.2005.00129.x

Defense of Marriage Act of 1996. H.R. 3396, 104th Cong. (1996).

DeJong, W. (1980). The stigma of obesity: The consequences of naïve assumptions concerning the causes of physical deviance. *Journal of Health and Social Behavior, 21*, 75–87.doi:10.2307/2136696

Diamond, L. M. (1998). Development of sexual orientation among adolescent and young adult women. *Developmental Psychology, 34*, 1085-1095.doi:10.1037//0012-1649.34.5.1085

Diamond, L. M. (2003). Was it a phase? Young women's relinquishment of lesbian/bisexual identities over a 5-year period. *Journal of Personality and Social Psychology*, *84,* 352- 364. doi:10.1037//0022-3514.84.2.352

Diamond, L. M. (2008). Female bisexuality from adolescence to adulthood: Results from a 10-year longitudinal study. *Developmental Psychology*, *44,* 5-14. doi:10.1037/0012-1649.44.1.5

Dibble, J. L., Levine, T. R., & Park, H. S. (2012). The Unidimensional Relationship Closeness Scale (URCS): Reliability and validity evidence for a new measure of relationship closeness. *Psychological Assessment*. doi: 10.1037/a0026265

Di Pentima, L., & Toni, A. (2009). Subtle, blatant prejudice and attachment: A study in adolescent age. *Giornale di Psicologia, 3*(2), 153-163.

Dodge, B., & Sandfort, T. G. M. (2007). A review of mental health research on bisexual individuals when compared to homosexual and heterosexual individuals. In B.A. Firestein (Ed.) *Becoming visible: Counseling bisexuals across the lifespan* (pp. 28-51). New York: Columbia University Press.

Donaldson, S. I., & Grant-Vallone, E. J. (2002). Understanding self-report bias in organizational behavior research. *Journal of Business and Psychology, 17,* 245-260.doi:10.1023/A:1019637632584

Dworkin, S. H. (2001).Treating the bisexual client. *Journal of Clinical Psychology, 57*, 671–680. doi: 10.1002/jclp.1036

Edwards, A.L. (1953). The relationship between the judged desirability of a trait and the probability that it will be endorsed. *Journal of Applied Psychology, 37*, 90-93.doi:10.1037/h0058073

Eliason, M.J. (1997). The prevalence and nature of biphobia in heterosexual undergraduate students. *Archives of Sexual Behavior, 26,* 317-326. doi:10.1023/A:1024527032040

Ellis, H. (1927). *Psychology of sex: Sexual inversion* (Vol. 2, 3rd ed.). London: Wilson and Macmillan.

Ellis, B. J. (1992). The evolution of sexual attraction: Evaluative mechanisms in women. In J.Barkow, L. Cosmides, & J. Tooby (Eds.), *The adapted mind* (pp. 267-288). New York: Oxford University Press.

Employment Non-Discrimination Act of 2011, S. 811, 112th Cong. (2011).

Equal Access to COBRA Act of 2011, S. 563, 112th Cong. (2011).

Family and Medical Leave Inclusion Act, H.R. 2364, 112th Cong. (2011).

Fassinger, R. E., & Arseneau, J. R. (2007). “I’d rather get wet than be under that umbrella”: Differentiating the experiences and identities of lesbian, gay, bisexual, and transgender people. In K. J. Bieschke, R. M. Perez, & K. A. DeBord (Eds.), *Handbook of counseling and psychotherapy with lesbian, gay, bisexual, and transgender clients* (2nd. ed., pp. 19-49). Washington, DC: American Psychological Association.

Firestein, B. (1996). *Bisexuality: The psychology and politics of an invisible minority*. Thousand Oaks, CA: Sage.

Firestein, B. (2007a). Becoming visible: counseling bisexuals across the lifespan. New York, NY: Columbia University Press.

Firestein, B. (2007b). Cultural and relational contexts of bisexual women: Implications for therapy. In K. J. Bieschke, R. M. Perez, & K. A. DeBord (Eds.), *Handbook of*

counseling and psychotherapy with lesbian, gay, bisexual, and transgender clients (2nd. ed., pp. 19-49). Washington, DC: American Psychological Association.

Floyd, F. J., & Bakeman, R. (2006). Coming-out across the life course: Implications of age and historical context. *Archives of Sexual Behavior, 35,* 287-296. doi:10.1007/s10508-006-9022-x

Ford, C.S., and Beach, F.A. 1951. Patterns of sexual behavior. New York: Harper & Row.

Fox, R. C. (2006). Affirmative psychotherapy with bisexual women and bisexual men: An introduction. *Journal of Bisexuality, 6*, 1-11. doi:10.1300/J159v06n01_01

Fraley, R. C., Heffernan, M. E., Vicary, A. M., & Brumbaugh, C. C. (2011). The Experiences in Close Relationships--Relationship Structures Questionnaire: A method for assessing attachment orientations across relationships. *Psychological Assessment, 23*, 612-625. doi:10.1037/a0022898

Fraley, R. C., & Shaver, P. R. (2000). Adult romantic attachment: Theoretical developments, emerging controversies, and unanswered questions. *Review of General Psychology, 4,* 132-154. doi:10.1O37//1089-2680.4.2.132

Fraley, R. C., & Waller, N. G. (1998). Adult attachment patterns: A test of the typological model. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 77-114). New York: Guilford Press.

Fraley, R. C., Vicary, A. M., Brumbaugh, C. C., & Roisman, G. I. (2011). Patterns of stability in adult attachment: An impirical test of two models of continuity and

change. *Journal of Personality and Social Psychology, 101*, 974-992. doi:10.1037/a0024150

Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item response theory analysis of self-report measures of attachment. *Journal of Personality and Social Psychology, 78*, 350-365. doi:10.1037//0022-3514.78.2.350

Freeney, J. A., Noller, P., & Callan, V. J. (1994). Asessing adult attachment. In M. B. Sperling & W. H. Berman (Eds.), Attachment in adults: Clinical and developmental perspectives (pp.128-152). New York: Guillford Press.

Freud, S. (1937/1963). Analysis terminable and interminable. In P. Rieff (Ed.), *Sigmund Freud: Therapy and technique* (pp. 233-271). Retrieved from http://books.google.com/books (Original work published 1937)

Frost, D., & Meyer, I. (2009). Internalized homophobia and relationship quality among lesbians, gay men, and bisexuals. *Journal of Counseling Psychology, 56*, 97-109. doi:10.1037/a0012844

Garnets, L. D. (2002). Sexual orientations in perspective. *Cultural Diversity and Ethnic Minority Psychology,8*, 115-129.doi:10.1037//1099-9809.8.2.115

George, C., Kaplan, N., & Main, M. (1984, 1985, 1996). Adult Attachment Interview. Unpublished manuscript, Department of Psychology, University of California, Berkeley (third edition).

Goetstouwers, L. (2006). Affirmative psychotherapy with bisexual men. *Journal of Bisexuality, 6,* 27-49. doi:10.1300/J159v06n01_03

Goldberg, N. G, & Badgett, M. V. L. (2009). *Tax Implications for Same-Sex Couples.* U.C. Los Angeles: The Williams Institute. Retrieved from: http://escholarship.org/uc/item/4hm346hp

Gormley, B., & Lopez, F. G. (2010). Authoritarian and homophobic attitudes: Gender and adult attachment-style differences. *Journal of Homosexuality, 57*, 525-538. doi:10.1080/00918361003608715

Griffin, D. W., &Bartholomew, K. (1994).Models of the self and other: Fundamental dimensions underlying measures of adult attachment. *Journal of Personality and Social Psychology, 67*, 430-445.doi:10.1037/0022-3514.67.3.430

Hadija, Z., Barnes, S. B., & Hair, N. (2012). Why we ignore social networking advertising. Qualitative Market Research: An International Journal, 15, 19 – 32. doi: 10.1108/13522751211191973

Haider-Markel, D. P., & Joslyn, W. (2005). Attributions and the regulation of marriage: Considering the parallels between race and homosexuality.*PS: Political Science and Politics, 38*, 233-240.doi:10.1017/S1049096505056362

Haider-Markel, D. P., & Joslyn, W. (2008). Pulpits versus ivory towers: Socializing agents and evolution attitudes. *Social Science Quarterly, 89*, 665-683.doi:10.1111/j.1540-6237.2008.00553.x

Harlow, C. W. (2005). *Hate crimes reported by victim and police, Special report.* Washington, DC: Department of Justice, Bureau of Justice Statistics. Retrieved from www.ojp.usdoj.gov/bjs/pub/pdf/hcrvp.pdf

Haslam, N., & Levy, S. R. (2006). Essentialist beliefs about homosexuality: Structure and implications for prejudice. Personality and Social Psychology Bulletin, 32, 471-485.doi:10.1177/0146167205276516

Hatzenbuehler, M. L., McLaughlin, K. A., Keyes, K. M., and Hasin, D. S. (2010). The impact of institutional discrimination on psychiatric disorders in lesbian, gay, and bisexual populations: A prospective study. *American Journal of Public Health, 100*, 452-459. doi:10.2105/AJPH.2009.168815

Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, *52*, 511-524. doi:10.1037/0022-3514.52.3.511

Hegarty, P. J. (2007). Internationalizing the history of psychology. *History and Philosophy of Psychology, 9*, 73-76.doi:10.1037/1093-4510.10.2.75

Hegarty, P., (2010). A stone in the soup? Changes in sexual prejudice and essentialist beliefs among British students in a class on LGBT psychology. Psychology and Sexuality, 1, 3-20. doi: 10.1080/19419891003634356

Hegarty P., & Pratto, F. (2001). Sexual orientation beliefs: Their relationship to anti-gay attitudes and biological determinist arguments. *Journal of Homosexuality, 41*, 121-135.doi:10.1300/J082v41n01_04

Heider, F. (1958). *The Psychology of Interpersonal Relations.* New York: Wiley.

Herek, G. M. (1984). Attitudes toward lesbian and gay men: A factor analytic study. *Journal of Homosexuality, 10*, 39-51.doi:10.1300/J082v10n01_03

Herek, G. M. (1994). Assessing heterosexuals' attitudes toward lesbians and gay men: Areview of empirical research with the ATLG scale. In B. Greene & G. M. Herek(Eds.), *Lesbian and gay psychology: Theory, research, and clinical applications.* Newbury Park, CA: Sage.

Herek, G. M. (1997). The HIV epidemic and public attitudes toward lesbians and gay men. In M.P. Levine, P. Nardi, & J. Gagnon (Eds.) *In changing times: Gay men and lesbians encounter HIV/AIDS* (pp. 191-218). Chicago: University of Chicago Press.

Herek, G. M. (2000). The psychology of sexual prejudice. *Current Directions in Psychological Science, 9*, 19-22. doi:10.1111/1467-8721.00051

Herek, G. M. (2002). Heterosexual's attitudes toward bisexual men and women in the United States. *The Journal of Sex Research, 29,* 264-274. doi:10.1080/00224490209552150

Herek, G. M. (2003). The psychology of sexual prejudice. In L. D. Garnets and D. C. Kimmel (Eds.), *Psychological perspectives on lesbian, gay, and bisexual experiences* (2nd ed., pp. 157-164). New York, NY: Columbia University Press.

Herek, G. M. (2004). Beyond "homophobia": Thinking about sexual stigma and prejudice in the twenty-first century. *Sexuality Research & Social Policy, 1*, 6–24. doi:10.1525/srsp.2004.1.2.6

Herek, G. M. (2008). Hate crimes and stigma-related experiences among sexual minority adults in the United States: Prevalence estimates from a national probability

sample. *Journal of Interpersonal Violence, 24*, 54-74. doi:10.1177/0886260508316477

Herek, G. M. (2009). Sexual stigma and sexual prejudice in the United States: A conceptual framework. In D. A. Hope (Ed.), *Nebraska Symposium on Motivation: Vol. 54: Contemporary perspectives on lesbian, gay, and bisexual identities* (pp. 65-111). New York, NY: Springer.

Herek, G. M., & Garnets, L. (2007). Sexual orientation and mental health. *Annual Review of Clinical Psychology, 3,* 353-375. doi:10.1146/annurev.clinpsy.3.022806.091510

Herek, G. M., Gillis, J. R., & Cogan, J. C. (2009). Internalized stigma among sexual minority adults: Insights from a social psychological perspective. *Journal of Counseling Psychology*, *56*, 32-43. doi:10.1037/a0014672

Herek, G. M., Norton, A., Allen, T., & Sims, C. (2010). Demographic, psychological, and social characteristics of self-identified lesbian, gay, and bisexual adults in a US probability sample. *Sexuality Research & Social Policy, 7*, 176-200.doi:10.1007/s13178-010-0017-y

Hesse, E. (1999). The Adult Attachment Interview: Historical and current perspectives. In J. Cassidy & P. R. Shaver (Eds.), Adult attachment: Theory research, and clinical applications (pp. 55-85). New York: Guilford Press.

Hirschfeld, M. 2000. *The homosexuality of men and women* (2nd ed.). Translated by M. A. Lombardi-Nash. Buffalo, NY: Prometheus Books.

Hooker, E. (1957). The adjustment of the male overt homosexual.*Journal of Projective Techniques, 21*, 18-31.doi:10.1080/08853126.1957.10380742

Hudson, W. W., & Ricketts, W. A. (1980). A strategy for the measurementof homophobia. *Journal of Homosexuality, 5*, 356-371.doi:10.1300/J082v05n04_02

Israel, T., & Mohr, J. (2004). Attitudes toward bisexual women and men: Current research, future directions. In R. Fox (Ed.), *Current research on bisexuality* (pp. 117-134). Bingham, NY: Harrington Park Press.

Jellison, W. A., & McConnell, A. R. (2003)/ The mediating effects of attitudes toward homosexuality between secure attachment and disclosure outcomes among gay men. Journal of Homosexuality, 46, 159-177.

Jordan, M. D. (1997). *The invention of sodomy in Christian theology*. Chicago, IL: University of Chicago Press.

Jorm, A. F., Korten, A. E., Rodgers, B., Jacomb, P. A., and Christensen, H. (2002). Sexual orientation and mental health: Results from a community survey of young and middle-aged adults. *British Journal of Psychiatry, 180*, 423-427. doi:10.1192/bjp.180.5.423

Juvonen, J. (1991). Deviance, perceived responsibility, and negative peer reactions. *Developmental Psychology, 27*, 672-681.doi:10.1037/0012-1649.27.4.672

Juvonen, J. (1992). Negative peer reactions from the perspective of the reactors. *Journal of Educational Psychology, 84*, 314-321.doi:10.1037//0022-0663.84.3.314

Kimmel, D. C., Amaro, H., & Melton, G. B. (1991). Avoiding heterosexist bias in psychological research. *American Psychologist, 46*, 957-963. doi:10.1037/0003-066X.46.9.957.

King, M., Semlyen, J., See Tai, S., Killaspy, H., Osborn, D., Popelyuk, & Nazareth, I. (2008). A systematic review of mental disorder, suicide, and deliberate self harm in lesbian, gay and bisexual people. *BioMed Central Psychiatry, 8,* 1-17.doi:10.1186/1471-244X-8-70

Kinsey, A. C., Pomeroy, W. B., & Martin, C. E. (1948). *Sexual behavior in the human male*. Philadelphia, PA: W.B. Saunders.

Kinsey, A. C., Pomeroy, W. B., Martin, C. E., & Gebhard, P. (1953). *Sexual behavior in the human female*. Philadelphia, PA: W.B. Saunders.

Kitzinger, C., & Wilkinson, S. (2004). Social advocacy for equal marriage: The politics of 'rights' and the psychology of 'mental health'. *Analyses of Social Issues & Public Policy4*, 173-194. doi:10.1111/j.1530-2415.2004.00040.x

Klein, F., Spekoff, B., & Wolf, T. J. (1985). Sexual orientation: A multi-variable dynamic process. *Journal of Homosexuality, 11,* 35-49. doi:10.1300/J082v11n01_04

Koh, A. S., & Ross, L. K. (2006). Mental health issues: A comparison of lesbian, bisexual and heterosexual women. Journal of Homosexuality, 51, 33-57. doi:10.1300/J082v51n01_03

Leslie, C. (2000). Creating criminals: The injuries inflicted by "unenforced" sodomy laws. Harvard Civil Rights – *Civil Liberties Law Review, 35*(1), 103-181.

Levitt, H., Ovrebo, E., Anderson-Cleveland, M., Leone, C., Jeong, J., Arm, J. R., . . . Horne, S. G. (2009). Balancing dangers: GLBT experience in a time of anti-GLBT legislation. *Journal of Counseling Psychology, 56*, 67-81. doi:10.1037/a0012988

Lopez, F., & Brennan, K. A. (2000). Dynamic processes underlying adult attachment organization: Toward an attachment theoretical perspective on the healthy and effective self. *Journal of Counseling Psychology, 47,* 283-300. doi:10.1037//0022-0167.47.3.283

Main, M. (n.d.). Adult attachment interview protocol. Retrieved from www.psychology.sunysb.edu/attachment/measures/content/aai_interview.pdf. Retrieved December 15, 2011.

Mallinckrodt, B., Gantt, D. L., &Coble, H. M. (1995). Attachment patterns in the psychotherapy relationship: Development of the Client Attachment to Therapist Scale.*Journal of Counseling Psychology, 42*, 307-317. doi:10.1037/0022-0167.42.3.307

Marsh, T., & Brown, J. (2011). Homonegativity and its relationship to religiosity, nationalism and attachment style. *Journal of Religion and Health, 50,* 575-591. doi:10.1007/s10943-009-9286-2

Marzullo, M. A., & Libman, A. J. (2009). *Research overview: Hate crimes and violence against lesbian, gay, bisexual, and transgender people.* (Ed. C. J. G. Ruddell-Tabisola). Washington, DC: Human Rights Campaign Foundation.

Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin, 129*, 674-697. doi:10.1037/0033-2909.129.5.674

Meyer, I., & Wilson, P. (2009). Sampling lesbian, gay, and bisexual populations. *Journal of Counseling Psychology, 56*, 23-31. doi:10.1037/a0014587

Mikulincer, M. (1997). Adult attachment style and information processing: Individual differences in curiosity and cognitive disclosures. Journal of Personality and Social Psychology, 72, 1217-1230.doi:10.1037/0022-3514.72.5.1217

Mikulincer, M. (1998). Adult attachment style and individual differences in functional versus dysfunctional experiences of anger. *Journal of Personality and Social Psychology*, *74*, 513-524. doi:10.1037/0022-3514.74.2.513

Mikulincer, M., Gillath, O., Halevy, V., Avihou, N., Avidan, S., & Eshkoli, N. (2001). Attachment theory and reactions to others' needs: Evidence that activation of the sense of attachment security promotes empathic responses. *Journal of Personality and Social Psychology*, *81*, 1205-1224. doi:10.1037/0022-3514.81.6.1205

Mikulincer, M., & Horesh, N. (1999). Adult attachment style and the perception of others: The role of projective mechanisms. *Journal of Personality and Social Psychology*, *76*, 1022-1034. doi:10.1037/0022-3514.76.6.1022

Mikulincer, M., & Shaver, P. R. (2001). Attachment theory and intergroup bias: Evidence that priming the secure base schema attenuates negative reactions to out-groups. Journal of *Personality and Social Psychology, 81,* 97-115. doi:10.1037//0022-3514.81.1.97

Mohr, J. J., Israel, T., & Sedlacek, W. E. (2001). Counselors' attitudes regarding bisexuality as predictors of counselors' clinical responses: An analogue study of a female bisexual client. *Journal of Counseling Psychology*, *48*, 212–222. doi:10.1037//0022-0167.48.2.212

Mohr, J. J., & Rochlen, A. B. (1999). Measuring attitudes regarding bisexuality in lesbian, gay male, and heterosexual populations. *Journal of Counseling Psychology, 46*, 353-369.doi:10.1037//0022-0167.46.3.353

Mohr, J., Weiner, J., Chopp, R., & Wong, S. (2009). Effects of client bisexuality on clinical judgment: When is bias most likely to occur? *Journal of Counseling Psychology, 56*, 164-175. doi:10.1037/a0012816

Moradi, B., Mohr, J.J., Worthington, R.L., & Fassinger, R.E. (2009). Counseling psychology research on sexual (orientation) minority issues: Conceptual and methodological challenges and opportunities. *Journal of Counseling Psychology, 56*, 5-22. doi:10.1037/a0014572

Morrison, M.A., & Morrison, T.G. (2008). Development and validation of a scale measuring modern prejudice toward gay men and lesbian women. *Journal of Homosexuality, 4*3, 15-37. doi:10.1300/J082v43n02_02

Moss , E. Gosselin , C. Parent , S. Rousseau , D. Dumont , M. (1997). Attachment and joint problem-solving experiences during the preschool period. Social Development, 6, 1-17. doi:10.1111/1467-9507.00023

Mulick, P. S., & Wright, L. W. (2002). Examining the existence of biphobia in the heterosexual and homosexual populations. *Journal of Bisexuality, 2*, 45-64. doi:10.1300/J159v02n04_03

Obradors-Campos, M. (2011). Deconstructing biphobia. *Journal of Bisexuality, 11*, 207-226. doi:10.1080/15299716.2011.571986

Ochs, R. (1996). Biphobia: It goes more than two ways. In B. A. Firestein (Ed.), *Bisexuality: The psychology and politics of an invisible minority* (pp. 3-50). Thousand Oaks, CA: Sage.

Ochs, R. (2009). What is bisexuality? In R. Ochs & S. E. Rowley (Eds.), *Getting bi: Voices of bisexuals around the world* (2nd ed., pp. 7-9). Boston, MA: Bisexual Resource Center.

Ochs, R. (2011). Why we need to "get bi." *Journal of Bisexuality, 11*, 171-175. doi:10.1080/15299716.2011.571983

Paul, J. P., Catania, J., Pollack, L., Moskowitz, J., Canchola, J., Milla, T., Binson, D., & Stall, R. (2002). Suicide attempts among gay and bisexual men: Lifetime prevalence and antecedents. *American Journal of Public health, 92*, 1338-1345. doi:10.2105/AJPH.92.8.1338

Paulhus, D. L. (1991). Measurement and control of response biases. In J.P. Robinson et al. (Eds.), *Measures of personality and social psychological attitudes*. San Diego: Academic Press.

Pew Forum on Religion and Public Life. (2003). *Republicans unified, Democrats split on gay marriage: Religious beliefs underpin opposition to homosexuality.* Washington, DC: Pew Research Center. http://pewforum.org/docs/index.php?DocID=37.

Pew Forum on Religion and Public Life. (2008). U.S. *Religious Landscape*. Washington, DC: Pew Research Center. Retrieved from http://religions.pewforum.org/reports.

Potoczniak, D. J. (2007). Development of bisexual men's identities and relationships. In K. J. Bieschke, R. M. Perez, & K. A. DeBord (Eds.), *Handbook of counseling and psychotherapy with lesbian, gay, bisexual, and transgender clients* (2nd ed., pp. 119-145). Washington, DC: American Psychological Association.

Ramo, R. E., &Prochaska, J. J. (2012). Broad reach and targeted recruitment using Facebook for an online survey of young adult substance use. Journal of Medical Internet Research, 14, e28. doi: 10.2196/jmir.1878

Rholes, W. S. & Simpson, J. A. (2004). Attachment theory: Basic concepts and contemporary questions. In Rholes WS, Simpson JA. Adult Attachment: Theory, Research, and Clinical Implications. New York: Guilford Press. pp. 3–14.

Rust, P. C. (2000). Bisexuality: A contemporary paradox for women. *Journal of Social Issues*, *56*(2), 205–221.

Rust, P. C. (2001). Too many and not enough: The meaning of bisexual identities. *Journal of Bisexuality, 1*, 31-68.doi:10.1300/J159v01n01_04

Sable, P. (2008). What is adult attachment? *Clinical Social Work Journal, 36*, 21-30.doi:10.1007/s10615-007-0110-8

Saewyc, E. M., Skay, C. L., Pettingell, S. L., Reis, E. A., Bearinger, L., Resnick, M., . . . Combs, L. (2006). Hazards of stigma: The sexual and physical abuse of gay, lesbian, and bisexual adolescents in the United States and Canada. *Child Welfare, 85*(2), 195–213.

Sakalli, N. (2002). Application of the attribution-value model of prejudice to homosexuality. *The Journal of Social Psychology, 142*, 246-271. doi:10.1080/00224540209603899

Schwartz, J. P., & Lindley, L. D. (2005). Religious fundamentalism and attachment: Prediction of homophobia. *The International Journal for the Psychology of Religion, 15*, 145-157.doi:10.1207/s15327582ijpr1502_3

See, H., & Hunt, R. (2011). Bisexuality and identity: The double-edged sword: Stonewall research into bisexual experience. *Journal of Bisexuality, 11*, 290-299. doi:10.1080/15299716.2011.571995

Sherry, A. (2007). Internalized homophobia and adult attachment: Implications for clinical practice. *Psychotherapy: Theory, Research, Practice, Training, 44*, 219-225. doi:10.1037/0033-3204.44.2.219

Simpson, J. A. (1990). Influence of attachment styles on romantic relationships. *Journal of Personality and Social Psychology, 59*, 971-980.doi:10.1037/0022-3514.59.5.971

Simpson, J. A., Rholes, W., & Phillips, D. (1996). Conflict in close relationships: An attachment perspective. *Journal of Personality and Social Psychology*, *71*, 899-914. doi:10.1037/0022-3514.71.5.899

Smith, S. J., Zanotti, D. C., Axelton, A. M.,& Saucier, D. A. (2011). Individuals' beliefs about the etiology of same-sex sexual orientation. *Journal of Homosexuality, 58*, 1110-1131. doi:10.1080/00918369.2011.598417

Span, S. A. (2011). Addressing university students' anti-gay bias: An extension of the contact hypothesis. *American Journal of Sexuality Education, 6*, 192-205. doi: 10.1080/15546128.2011.571957

Spector, P.E. & Brannick, M.T. (1995). The nature and effects of method variance in organizational research. In Cooper, C.L, & Robertson, I.T. (Eds.), *International Review of Industrial and Organizational Psychology*, Vol. 10. New York: John Wiley & Sons.

Sullivan, M. K. (2003). Homophobia, history, and homosexuality: Trends for sexual minorities. *Journal of Human Behavior in the Social Environment, 8*, 2003. doi:10.1300/J137v8n02_01

Sullivan, M., & Wodarski, J. S. (2002). Social alienation in gay youth. *Journal of Human Behavior in the Social Environment, 5*(1), 1-17.

Swank, E. & Raiz, L. (2010). Predicting the support of same-sex relationship rights among social work students. *Journal of Gay & Lesbian Social Services, 22*, 149-164. doi: 10.1080/10538720903332552

Szymanski, D. M. (2009). Examining potential moderators of the link between heterosexist events and gay and bisexual men's psychological distress. *Journal of Counseling Psychology, 56,* 142-151. doi:10.1037/0022-0167.56.1.142

Szymanski, D. M., Kashubeck-West, S., & Meyer, J. (2008). Internalized heterosexism: A historical and theoretical overview. *The Counseling Psychologist, 36*, 510-524. doi:10.1177/0011000007309488

Szymanski, D. M., & Gupta, A. (2009). Examining the relationship between multiple internalized oppressions and African American lesbian, gay, bisexual, and questioning persons' self-esteem and psychological distress. *Journal of Counseling Psychology, 56,* 110-118. doi:10.1037/a0013317

Taywaditep, K. J., & Stokes, J. P. (1998). Male bisexualities: A cluster analysis of men with bisexual experience. *Journal of Psychology & Human Sexuality, 10*, 15-41. doi:10.1300/J056v10n01_02

Thomas, G. D. (2011). Gender and binegativity: Men's and women's attitudes toward male and female bisexuals. doi:10.1007/s10508-011-9767-8

Thorndike, R. L. (1967). The analysis and selection of test items. In D. Jackson & S. Messick (Eds.), *Problems in human assessment* (pp. 201–216). NewYork: McGraw-Hill.

Udry, J. R., & Chantala, K. (2002). Risk assessment of adolescents with same-sex relationships. *Journal of Adolescent Health, 31*, 84-92. doi:10.1016/S1054-139X(02)00374-9

Uniting American Families Act of 2011, S. 821, 112th Cong. (2011).

Vera, E.M., &Speight, S. L. (2003). Multicultural competence, social justice, and Counseling Psychology: Expanding our roles. *The Counseling Psychologist, 31*, 253-272. doi: 10.1177/0011000003031003001

Vernallis, K. (1991). Bisexual monogamy: Twice the temptation but half the fun? *Journal of Social Philosophy, 30*(3), 347-368.

Violence. (n.d.). *The American Heritage Dictionary of the English Language* (4th Ed.). Retrieved from http://dictionary.reference.com/browse/violence

Warner, J., McKeown, E., Griffin, M., Johnson, K., Ramsay, A., Cort, C., & King, M. (2004). Rates and predictors of mental illness in gay men, lesbians, and bisexual men and women: Results from a survey based in England and Wales. *British Journal of Psychiatry, 185*, 479-485. doi:10.1192/bjp.185.6.479

Weinberg, M. S., Williams, C. J., & Pryor, D. W. (1995). *Dual attraction: Understanding bisexuality*. New York, NY: Oxford University Press.

Weinberg, M. S., Williams, C. J., & Pryor, D. W. (2001). Bisexuals at midlife: Commitment, salience, and identity. *Journal of Contemporary Ethnography, 30*,108-208. doi:0.1177/089124101030002002

Weiss, J. T. (2003): GL vs. BT, Journal of Bisexuality, 3, 25-55. doi:10.1300/J159v03n03_02

West, K.,&Hewstone, M. (2012): Culture and contact in the promotion and reduction of anti-gay prejudice: Evidence from Jamaica and Britain. *Journal of Homosexuality, 59*, 44-66. doi:10.1080/00918369.2011.614907

Worthington, R., & Reynolds, A. (2009). Within-group differences in sexual orientation and identity. *Journal of Counseling Psychology, 56,* 44-55. doi:10.1037/a0013498

APPENDIX A

Informed Consent

Informed Consent Letter
TEXAS WOMAN'S UNIVERSITY
CONSENT TO PARTICIPATE IN RESEARCH

Title: Binegativity, Causal Attributions, and Adult Attachment

Investigator: Stephany Mahaffey, M.S. …...……………………………..940/453-0872
Advisors: Jenelle Fitch, Ph.D………………………………………940/898-2312

Explanation and Purpose of the Research

You are being asked to participate in a research study for Ms. Mahaffey's dissertation at Texas Woman's University. The purpose of this research is to examine the relationship between attributions of sexual orientation, adult attachment, and attitudes regarding bisexuality. You may choose to enter a drawing for one of two $50 gift cards for your participation in this study.

Research Procedures

For this study, you will be asked to fill out a series of questionnaires related to your beliefs and opinions about bisexuality and your experiences in close relationships. Your maximum total time commitment in the study is estimated to be approximately 25 minutes. You will be able to fill out the questionnaires at your own convenience. Responses may be saved mid-way and you may return to the survey at your convenience.

Potential Risks

Potential risks related to your participation in this study include the possibility of a release of confidential information. Confidentiality will be protected to the extent that is allowed by law. There is a potential risk of loss of confidentiality in all email, downloading, and internet transactions. Only the investigator and her advisor will have access to the data collected. All files will be stored on a blank flash drive that will be stored in a locked file cabinet in the investigator's residence. All data will be deleted within 5 years of the conclusion of this study. It is anticipated that the results of this study will be published in the investigator's dissertation as well as in other research publications and local and national presentations. However, no names or other identifying information will be included in any publication.

Another risk of participating in this study is possible emotional discomfort due to the material in the surveys. If you do experience any emotional discomfort regarding any aspect of any of the questionnaires, you may stop answering the questions at any time. A

list of mental health resources will be provided at the end of this informed consent form and after you submit your responses. You may choose to print this resource list for future reference.

The researchers will try to prevent any problem that could happen because of this research. You should let the researcher know at once if there is a problem and she will help you. However, TWU does not provide medical services or financial assistance for injuries that might happen because you are taking part in this research.

A third possible risk is your loss of time. The instruments were chosen to be quick, straight forward, and make use of Likert scales to rate your level of agreement as opposed to other methods of data collection. As mentioned previously, the entire packet should take approximately 25 minutes. However, you are free to withdraw from the study at any time.

A final risk relates to any coercion or pressure you may feel for participating in this study. Please know that your participation in this study is completely voluntary and should you feel that you would like to withdraw from the study, you are free to do so at any time.

Participation and Benefits

Your involvement in this research study is completely voluntary, and you may discontinue your participation at any time without penalty. You may choose to enter a drawing for one of two $50 gift cards for your participation in this research study. If you are interested, you may receive a summary of the results of this study, which will be emailed to you upon request.

Questions Regarding the Study

If you have any questions concerning this research you may ask the researchers; their phone numbers are at the top of this form. If you have any questions about your rights as a participant in this research or the way the study has been conducted, you may contact Texas Woman's University Office of Research and Sponsored Programs at 940-898-3378 or via e-mail at IRB@twu.edu. You may print a copy of this consent form to keep for your records.

By clicking the "Continue" button below, you acknowledge that you have read and understand this information and are giving your informed consent to participate in this study.

(Button will go here)

APPENDIX B

List of Mental Health Resources

List of Mental Health Resources

<u>Referral Agencies</u>

Dallas – Ft. Worth area:

Texas Woman's University Counseling Center
Denton, Texas
(940)-898-3801

Galaxy Counseling Center
Garland, Texas
(972)-272-4429

Timberlawn Trauma Program
Dallas, Texas
(800)-426-4944

Counseling Institute of Texas
Garland, Texas
(972)-494-0160

Friends of the Family
Lewisville and Denton, Texas
(940)-387-5131

The Family Place
Dallas, Texas
(214)-599-2170

Outside of the Dallas- Ft. Worth area:

American Psychological Association Referral Service
1-800-964-2000
http://locator.apahelpcenter.org/

National Register of Health Service Providers in Psychology
http://www.nationalregister.org/

American Board of Professional Psychology Directory of Specialists
http://www.abpp.org/abpp_public_directory.php

APPENDIX C

Demographics Questionnaire

Demographics Questionnaire

Please answer the following questions to the best of your ability.

1.	How old are you?	____________________________________
2.	What is your gender?	Man Woman Transgender/Transsexual Other: ______________
3.	How do you describe your sexual orientation?	Heterosexual Lesbian Gay Bisexual Other: ______________
4.	What ethnicity do you consider yourself? (Please choose the one with which you most closely identify)	American Indian/Alaskan Native/ Inuit Black/African American East Asian/ Asian American Latino/Hispanic Middle Eastern/West Asian Native Hawaiian/Pacific Islander South Asian/Asian Indian White/Caucasian Biracial/Multiracial/Multiethnic
7.	What is the closest to your annual household income?	_____ $0 - $20,000 _____ $20,001 - $40,000 _____ $40,001 - $60,000 _____ $60,001 - $80,000 _____ $80,001 - $100,000 _____ Over $100,000
8.	What is the highest level of education? Please select only one answer.	_____ No high school diploma _____ High School diploma or GED _____ AA/AS (2-year college degree) _____ BA/BS (4-year college degree) _____ Master's degree _____ Doctorate (MD, JD, PhD)

APPENDIX D

Relationship Closeness Scale

If you know any bisexual individuals, what is their relationship to you? Select all that apply.

☐ Friend	☐ Acquaintance
☐ Close friend	☐ Co-worker
☐ Immediate family	☐ Partner/Spouse
☐ Extended family	☐ Self
☐ Dated	☐ Don't know any

If the participant acknowledges a relationship with an individual who is bisexual, then they will be asked to complete the following section to evaluate the nature of that relationship.

Please read the instructions carefully for the following questions:

If you know one person who identifies as bisexual, consider your relationship with that person when responding to the following statements. If you know more than one bisexual individual, think about the person you feel closest to emotionally. The following statements refer to your relationship with this person.

Please think about your relationship with this person when responding to the following questions. Please respond to the following statements using this scale:

1 --------------- 2 --------------- 3 -------------- 4 --------------- 5 --------------- 6 -------------- 7
Strongly Disagree **Strongly Agree**

1. My relationship with this person is close.
2. When we are apart, I miss this person a great deal.
3. This person and I disclose important things to each other.
4. This person and I have a strong connection.
5. This person and I want to spend a lot of time together.
6. I'm sure of my relationship with this person.
7. This person is a priority in my life.
8. This person and I do a lot of things together.
9. When I have free time I choose to spend it alone with this person.
10. I think about this person a lot.
11. My relationship with this person is important in my life.
12. I consider this person when making important decisions.

(Dibble, Levine, & Park, 2011)

APPENDIX E

Beliefs about Causality of Sexual Orientation

Beliefs about Causality of Sexual Orientation

INSTRUCTIONS: The following items concern your personal beliefs about sexual orientation. Please circle one number to indicate how strongly you agree or disagree with each of the following statements.

1) **I believe being gay or lesbian is a personal choice.**

1 ------------------ 2 ------------------ 3 ------------------ 4 ------------------ 5 ------------------ 6

Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree

2) **I believe that biology (e.g., genes, hormones) determines whether a person is gay or lesbian.**

1 ------------------ 2 ------------------ 3 ------------------ 4 ------------------ 5 ------------------ 6

Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree

3) **I believe that the environment in which a person was raised determines whether they are gay or lesbian.**

1 ------------------ 2 ------------------ 3 ------------------ 4 ------------------ 5 ------------------ 6

Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree

4) **I believe that being bisexual is a personal choice.**

1 ------------------ 2 ------------------ 3 ------------------ 4 ------------------ 5 ------------------ 6

Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree

5) **I believe that biology (e.g., genes, hormones) determines whether a person is bisexual.**

1 ------------------ 2 ------------------ 3 ------------------ 4 ------------------ 5 ------------------ 6

Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree

6) **I believe that the environment in which a person was raised determines whether they are bisexual.**

1 ------------------ 2 ------------------ 3 ------------------ 4 ------------------ 5 ------------------ 6

Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree

APPENDIX F

Experiences in Close Relationships- Relationship Structures (ECR-RS)

Relationship Structures Questionnaire (ECR-RS)

This questionnaire is designed to assess the way in which you mentally represent important people in your life. You'll be asked to answer questions about your parents, your romantic partners, and your friends. Please indicate the extent to which you agree or disagree with each statement by circling a number for each item.

--
Please answer the following questions about your mother or a mother-like figure
--

1. It helps to turn to this person in times of need.
1 ------------- 2 -------------- 3 -------------- 4 -------------- 5 --------------6------------- 7
Strongly Disagree Strongly Agree

2. I usually discuss my problems and concerns with this person.
1 ------------- 2 -------------- 3 -------------- 4 -------------- 5 -------------- 6 ------------- 7
Strongly Disagree Strongly Agree

3. I talk things over with this person.
1 ------------- 2 -------------- 3 -------------- 4 -------------- 5 -------------- 6 ------------- 7
Strongly Disagree Strongly Agree

4. I find it easy to depend on this person.
1 ------------- 2 -------------- 3 -------------- 4 -------------- 5 -------------- 6 ------------- 7
Strongly Disagree Strongly Agree

5. I don't feel comfortable opening up to this person.
1 ------------- 2 -------------- 3 -------------- 4 -------------- 5 -------------- 6 ------------- 7
Strongly Disagree Strongly Agree

6. I prefer not to show this person how I feel deep down.
1 ------------- 2 -------------- 3 -------------- 4 -------------- 5 -------------- 6 ------------- 7
Strongly Disagree Strongly Agree

7. I often worry that this person doesn't really care for me.
1 ------------- 2 -------------- 3 -------------- 4 -------------- 5 -------------- 6 ------------- 7
Strongly Disagree Strongly Agree

8. I'm afraid that this person may abandon me.
1 ------------- 2 -------------- 3 -------------- 4 -------------- 5 -------------- 6 ------------- 7
Strongly Disagree Strongly Agree

9. I worry that this person won't care about me as much as I care about him or her.
1 ------------- 2 -------------- 3 -------------- 4 -------------- 5 -------------- 6 ------------- 7
Strongly Disagree Strongly Agree

--
Please answer the following questions about your father or a father-like figure
--

1. It helps to turn to this person in times of need.
1 ------------- 2 -------------- 3 -------------- 4 -------------- 5 --------------6------------- 7
Strongly Disagree Strongly Agree

2. I usually discuss my problems and concerns with this person.
1 ------------- 2 -------------- 3 -------------- 4 -------------- 5 -------------- 6 ------------- 7
Strongly Disagree Strongly Agree

3. I talk things over with this person.
1 ------------- 2 -------------- 3 -------------- 4 -------------- 5 -------------- 6 ------------- 7
Strongly Disagree Strongly Agree

4. I find it easy to depend on this person.
1 ------------- 2 -------------- 3 -------------- 4 -------------- 5 -------------- 6 ------------- 7
Strongly Disagree Strongly Agree

5. I don't feel comfortable opening up to this person.
1 ------------- 2 -------------- 3 -------------- 4 -------------- 5 -------------- 6 ------------- 7
Strongly Disagree Strongly Agree

6. I prefer not to show this person how I feel deep down.
1 ------------- 2 -------------- 3 -------------- 4 -------------- 5 -------------- 6 ------------- 7
Strongly Disagree Strongly Agree

7. I often worry that this person doesn't really care for me.
1 -------------- 2 --------------- 3 --------------- 4 --------------- 5 --------------- 6 -------------- 7
Strongly Disagree Strongly Agree

8. I'm afraid that this person may abandon me.
1 -------------- 2 --------------- 3 --------------- 4 --------------- 5 --------------- 6 -------------- 7
Strongly Disagree Strongly Agree

9. I worry that this person won't care about me as much as I care about him or her.
1 -------------- 2 --------------- 3 --------------- 4 --------------- 5 --------------- 6 -------------- 7
Strongly Disagree Strongly Agree

Please answer the following questions about your dating or marital partner.

Note: If you are not currently in a dating or marital relationship with someone, answer these questions with respect to a former partner or a relationship that you would like to have with someone.

---

1. It helps to turn to this person in times of need.
1 -------------- 2 --------------- 3 --------------- 4 --------------- 5 ---------------6-------------- 7
Strongly Disagree Strongly Agree

2. I usually discuss my problems and concerns with this person.
1 -------------- 2 --------------- 3 --------------- 4 --------------- 5 --------------- 6 -------------- 7
Strongly Disagree Strongly Agree

3. I talk things over with this person.
1 -------------- 2 --------------- 3 --------------- 4 --------------- 5 --------------- 6 -------------- 7
Strongly Disagree Strongly Agree

4. I find it easy to depend on this person.
1 -------------- 2 --------------- 3 --------------- 4 --------------- 5 --------------- 6 -------------- 7
Strongly Disagree Strongly Agree

5. I don't feel comfortable opening up to this person.
1 -------------- 2 --------------- 3 --------------- 4 --------------- 5 --------------- 6 -------------- 7
Strongly Disagree Strongly Agree

6. I prefer not to show this person how I feel deep down.
1 -------------- 2 --------------- 3 --------------- 4 --------------- 5 --------------- 6 -------------- 7
Strongly Disagree Strongly Agree

7. I often worry that this person doesn't really care for me.
1 -------------- 2 --------------- 3 --------------- 4 --------------- 5 --------------- 6 -------------- 7
Strongly Disagree Strongly Agree

8. I'm afraid that this person may abandon me.
1 -------------- 2 --------------- 3 --------------- 4 --------------- 5 --------------- 6 -------------- 7
Strongly Disagree Strongly Agree

9. I worry that this person won't care about me as much as I care about him or her.
1 -------------- 2 --------------- 3 --------------- 4 --------------- 5 --------------- 6 -------------- 7
Strongly Disagree Strongly Agree

--

Please answer the following questions about your best friend

--

--

1. It helps to turn to this person in times of need.
1 -------------- 2 --------------- 3 --------------- 4 --------------- 5 ---------------6-------------- 7
Strongly Disagree Strongly Agree

2. I usually discuss my problems and concerns with this person.
1 -------------- 2 --------------- 3 --------------- 4 --------------- 5 --------------- 6 -------------- 7
Strongly Disagree Strongly Agree

3. I talk things over with this person.
1 -------------- 2 --------------- 3 --------------- 4 --------------- 5 --------------- 6 -------------- 7
Strongly Disagree Strongly Agree

4. I find it easy to depend on this person.
1 -------------- 2 --------------- 3 --------------- 4 --------------- 5 --------------- 6 -------------- 7
Strongly Disagree Strongly Agree

5. I don't feel comfortable opening up to this person.
1 -------------- 2 --------------- 3 --------------- 4 --------------- 5 --------------- 6 -------------- 7
Strongly Disagree Strongly Agree

6. I prefer not to show this person how I feel deep down.
1 -------------- 2 --------------- 3 --------------- 4 --------------- 5 --------------- 6 -------------- 7
Strongly Disagree Strongly Agree

7. I often worry that this person doesn't really care for me.
1 -------------- 2 --------------- 3 --------------- 4 --------------- 5 --------------- 6 -------------- 7
Strongly Disagree Strongly Agree

8. I'm afraid that this person may abandon me.
1 -------------- 2 --------------- 3 --------------- 4 --------------- 5 --------------- 6 -------------- 7
Strongly Disagree Strongly Agree

9. I worry that this person won't care about me as much as I care about him or her.
1 -------------- 2 --------------- 3 --------------- 4 --------------- 5 --------------- 6 -------------- 7
Strongly Disagree Strongly Agree

Fraley, Waller, and Brennan (2000)

APPENDIX G

Biphobia Scale

Biphobia Scale

INSTRUCTIONS: This survey is designed to measure your thoughts, feelings, and behaviors with regards to bisexual individuals. It is not a test, so there are no right or wrong answers. Answer each item by clicking the number after each question as follows:

1. I do not like bisexual individuals.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Strongly Agree Strongly Disagree

2. I think bisexuality is wrong.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Strongly Agree Strongly Disagree

3. I would like to have a bisexual person as a neighbor.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Strongly Agree Strongly Disagree

4. I would be friends with the person who is bisexual.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Strongly Agree Strongly Disagree

5. I am comfortable around bisexual individuals.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Strongly Agree Strongly Disagree

6. I discriminate against bisexual people.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Strongly Agree Strongly Disagree

7. I would hit a bisexual person for coming on to me.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Strongly Agree Strongly Disagree

8. Bisexual individuals spread AIDS to the heterosexual population.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Strongly Agree Strongly Disagree

9. Bisexual people make me nervous.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Strongly Agree Strongly Disagree

10. Bisexual individuals deserve to get discriminated against.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Strongly Agree Strongly Disagree

11. Bisexuality is acceptable to me.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Strongly Agree Strongly Disagree

12. I do not think that bisexual people should work with children.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Strongly Agree Strongly Disagree

13. I make derogatory remarks about bisexual people.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Strongly Agree Strongly Disagree

14. Bisexual people should not get married.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Strongly Agree Strongly Disagree

15. Bisexual individuals are not capable of monogamous relationships.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Strongly Agree Strongly Disagree

16. I would be comfortable having a bisexual roommate.

1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐
Strongly Agree				Strongly Disagree	

17. I teasing and joke about bisexual people.

1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐
Strongly Agree				Strongly Disagree	

18. You cannot trust a person who is bisexual.

1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐
Strongly Agree				Strongly Disagree	

19. I would get angry if a bisexual person made sexual advances toward me.

1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐
Strongly Agree				Strongly Disagree	

20. I think I could work with the bisexual person.

1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐
Strongly Agree				Strongly Disagree	

21. I get anxious when I have to interact with bisexual people.

1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐
Strongly Agree				Strongly Disagree	

22. I avoid bisexual people.

1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐
Strongly Agree				Strongly Disagree	

23. When I meet a bisexual person I think, "What a waste."

1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐
Strongly Agree				Strongly Disagree	

24. I have rocky relationships with people I suspect are bisexual.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Strongly Agree Strongly Disagree

25. Bisexual people want to have sex with everybody.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Strongly Agree Strongly Disagree

26. Bisexual people are not capable of controlling their sexual impulses.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Strongly Agree Strongly Disagree

27. I feel uneasy around bisexual people.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Strongly Agree Strongly Disagree

28. I would not go to a public space where I knew there would be bisexual individuals.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Strongly Agree Strongly Disagree

29. It does not matter to me if my friends are bisexual.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Strongly Agree Strongly Disagree

30. I would not want to talk to someone I knew was bisexual.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Strongly Agree Strongly Disagree

(Mulick & Wright, 2002)

APPENDIX H

Attitudes Regarding Bisexuality Scale – Female and Male Forms

Attitudes Regarding Bisexuality Scale - Female Form

INSTRUCTIONS: Please read each of the following statements and rate them according to how accurately they describe your attitudes and beliefs. Please respond honestly and answer every question according to the rating scale below.

1------------------------2------------------------3------------------------4------------------------5

Strongly Disagree			**Strongly Agree**	

___ 1. Most women who identify as bisexual have *not* yet discovered their true sexual orientation.

___ 2. Female bisexuality is *not* a perversion.

___ 3. Most women who call themselves bisexual are temporarily experimenting with their sexuality.

___ 4. As far as I'm concerned, female bisexuality is unnatural.

___ 5. Female bisexuals are afraid to commit to one lifestyle.

___ 6. The growing acceptance of female bisexuality indicates a decline in American values.

___ 7. Most women who claim to be bisexual are in denial about their true sexual orientation.

___ 8. Female bisexuality is harmful to society because it breaks down the natural divisions between the sexes.

___ 9. Lesbians are less confused about their sexuality than bisexual women.

___ 10. Bisexuality in women is immoral.

___ 11. Just like homosexuality and heterosexuality, bisexuality is a stable sexual orientation for women.

___ 12. Bisexual women are sick.

Attitudes Regarding Bisexuality Scale - Male Form

INSTRUCTIONS: Please read each of the following statements and rate them according to how accurately they describe your attitudes and beliefs. Please respond honestly and answer every question according to the rating scale below.

1------------------------2------------------------3------------------------4------------------------5
Strongly Disagree — **Strongly Agree**

___ 1. Most men who claim to be bisexual are in denial about their true sexual orientation.

___ 2. Male bisexuality is harmful to society because it breaks down the natural divisions between the sexes.

___ 3. Gay men are less confused about their sexuality than bisexual men.

___ 4. Bisexuality in men is immoral.

___ 5. Just like homosexuality and heterosexuality, bisexuality is a stable sexual orientation for men.

___ 6. Bisexual men are sick.

___ 7. Most men who identify as bisexual have *not* yet discovered their true sexual orientation.

___ 8. Male bisexuality is *not* a perversion.

___ 9. Most men who call themselves bisexual are temporarily experimenting with their sexuality.

___ 10. As far as I'm concerned, male bisexuality is unnatural.

___ 11. Male bisexuals are afraid to commit to one lifestyle.

___ 12. The growing acceptance of male bisexuality indicates a decline in American values.

(Mohr & Rochlen, 1999)

APPENDIX I

Copy of IRB Approval Letter

Institutional Review Board
Office of Research and Sponsored Programs
P.O. Box 425619, Denton, TX 76204-5619
940-898-3378 FAX 940-898-4416
e-mail: IRB@twu.edu

May 21, 2012

Ms. Stephany Mahaffey
3910 Old Denton Road, Apt. 1916
Carrollton, TX 75007

Dear Ms. Mahaffey:

Re: Binegativity, Causal Attributions, and Adult Attachment (Protocol #: 17047)

The above referenced study has been reviewed by the TWU Institutional Review Board (IRB) and appears to meet our requirements for the protection of individuals' rights.

If applicable, agency approval letters must be submitted to the IRB upon receipt PRIOR to any data collection at that agency. A copy of the annual/final report is enclosed. A final report must be filed with the Institutional Review Board at the completion of the study. Because you do not utilize a signed consent form for your study, the filing of signatures of subjects with the IRB is not required.

This approval is valid one year from May 17, 2012. Any modifications to this study must be submitted for review to the IRB using the Modification Request Form. Additionally, the IRB must be notified immediately of any unanticipated incidents. If you have any questions, please contact the TWU IRB.

Sincerely,

Dr. Kathy DeOrnellas, Chair
Institutional Review Board - Denton

enc.

cc. Dr. Shannon Scott, Department of Psychology & Philosophy
Dr. Jenelle Fitch, Department of Psychology & Philosophy
Graduate School