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CONCEALABLE STIGMAS:

FACTORS THAT INFLUENCE INTERNALIZED SHAME

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Abstract

The concealable stigma of having a minority sexual orientation was the focus of this study. Specifically, the constructs of attachment (i.e., attachment anxiety and attachment avoidance) and perceived social support (i.e., family perceived social support and friend perceived social support) were examined as predictors of internalized heterosexism (IH). Perceived social support was also examined as a mediator of the relation between attachment and IH. The participants were 124 gay and bisexual men, 18 to 25 years old who were enrolled in an institution of higher education. Results indicated that attachment anxiety, attachment avoidance, family perceived social support and friend perceived social support were all significant, yet modest predictors of IH, accounting for a small proportion of the variance in IH. Mediation analyses showed that neither family perceived social support nor friend perceived social support mediated the relations between attachment anxiety and IH or attachment avoidance and IH. Post-hoc analyses documented that sexual orientation outness accounted for a large proportion of the variance in IH (17.6%), and mediated the relation between attachment avoidance and IH, suggesting that attachment avoidance may serve as a protective factor against internalized shame (i.e., IH). Sexual orientation outness did not mediate the relation between attachment anxiety and IH, nor did it moderate the relations between attachment anxiety and IH or attachment avoidance and IH.

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Chapter 1

Introduction

Many individuals experience some form of social stigma: a negative attribute (e.g., a physical, psychological, medical, environmental, or other characteristic) or experience in which society and its members at large deem as undesirable or unacceptable, and which devalues the individual (Goffman, 1963). Social stigmas leave individuals vulnerable to discrimination, derision, and denigration. Therefore, it is only natural for individuals to want to conceal their stigmas in order to avoid harassment and judgment from others. However, in the context of concealment, not all stigmas are the same: some individuals are able to conceal their stigmas, while others cannot.

Visible Stigma

By definition, individuals with visible stigmas (e.g., using a wheelchair, having scars on one's face, being obese) are not easily able, if at all, to conceal their stigmas. The disadvantage of visible stigmas is that individuals are more vulnerable to personal attacks of harassment and judgment from others. However, having a visible stigma is also advantageous in that these individuals are far less likely to struggle with the internal turmoil of deciding if, how, when, and to whom they conceal their stigma (Quinn, 2006).

Concealable Stigma

Not all stigmas are visible. Conceptually, "concealable stigma" is an umbrella term that encompasses a wide range of stigmas (e.g., HIV/AIDS, herpes, previous incarceration, Bulimia Nervosa, addiction to heroin, having a prosthetic leg, Tourette's Syndrome, Multiple Sclerosis, low SES, being birthed as the result of one's biological mother having been raped). Concealable stigma is defined by having "a stigmatized identity that is not immediately knowable in a social

interaction" (Quinn, 2006, p.84). Although many concealable stigmas, as listed above, appear inherently undesirable, they are advantageous in that individuals may choose to keep their stigmas hidden from others, and "pass" as normal (Goffman, 1963), resulting in more positive social interactions with others (Jones et al., 1984). The ability to conceal one's stigma serves as a protective mechanism from which one can lessen the number of negative messages they receive from others.

Concealable stigmas are also disadvantageous in that individuals experience the internal struggle of deciding if, how, when, and to whom they conceal their stigmas. Empirical research suggests that this struggle is associated with negative outcomes. Smart and Wegner (1999) found that women with eating disorders who concealed their disorder from others experienced negative cognitive effects (e.g., greater intrusive thoughts, secrecy, and suppression) during social interactions compared to women with eating disorders who did not keep their disorder concealed. Additionally, Frable, Blackstone, and Scherbaum (1990) found that during social interactions with strangers, those with a wide range of concealable stigmas, compared to those with visible stigmas, were more likely to agree with the stranger's opinions, be more aware of the social interaction between him/her and the stranger, and pay greater attention to the stranger's word choice. In short, these two studies suggest that concealable stigmas are associated with unique stressors.

Distinction between Visible and Concealable Stigma

Visible and concealable stigmas differ in definition based upon the degree of visibility, and in the nature of their disadvantages and advantages. Additionally, Frable, Platt, and Hoey (1998) found that individuals with concealable stigmas have lower self-esteem and greater negative affect compared to individuals with visible stigmas, documenting the unique stressor

experienced by those with concealable stigmas. It is neither the contention nor the goal of this author to suggest that visible stigmas are more desirable than concealable stigmas, or vice versa, but rather, to highlight the internal struggle and potential negative outcomes that are uniquely experienced by those with concealable stigmas.

Minority Sexual Orientation as a Concealable Stigma

The concealable stigma that was examined in this study was sexual orientation, specifically, sexual minority (i.e., any non-heterosexual orientation, such as gay, bisexual, queer, questioning) men. Broadly speaking, individuals whose sexual orientation fall outside society's heterosexual norm are the recipients of negative messages. These messages are perpetrated against sexual minority individuals throughout the course of their lives, and are centered on the theme that who they are, based upon their sexual orientation, is bad, unacceptable, shameful, and immoral. These negative messages are sent by individuals (e.g., family members, peers, educators), communities and institutions (e.g., churches, schools, organizations), and by society and its members at large (Szymanski, Kashubeck-West, & Meyer, 2008a). A prime example of these negative messages in the current zeitgeist is the new meaning of the term "gay." This term has been integrated into the idioms of current dialogue in American culture to represent both animate (e.g., "he's so gay") and inanimate (e.g., "his pants are gay") objects as weird, undesirable, or bad (Carnaghi & Maass, 2007; Lalor & Rendle-Short, 2007). As a result of receiving these heterosexist messages over time, it is believed that all sexual minority individuals develop similar negative beliefs about themselves to some degree, which is known as internalized heterosexism (IH; Szymanski, Kashubeck-West, & Meyer, 2008a).

Primary Research Question

Given that all sexual minority individuals are believed to receive negative and invalidating messages about who they are on individual, local, and societal levels, the salient research question is, "Why do some individuals internalize these negative messages more than others, resulting in a more negative view of themselves?" Stated empirically, the research question of this study was, "What factors influence the development of internalized heterosexism in sexual minority men?" This question is an important one, given that IH has been well documented in the scientific literature as being associated with devastating outcomes for sexual minority men (see Szymanski, Kashubeck-West, & Meyer, 2008b for a review), all of whom experience IH to varying degrees. However, only limited empirical research has examined factors which may serve to influence the degree to which sexual minority men develop IH. As a result, it is not well understood why some sexual minority men experience greater IH than others. Similarly, it is not well known why individuals with a wide range of concealable stigmas experience varying levels of internalized shame.

Minority Stress Theory

Minority stress theory (Meyer, 1995, 2003) postulates that individuals from minority statuses (e.g., sexual minorities, racial minorities, individuals with disabilities) hold values that are in direct contrast to the values held by mainstream society and by those holding majority statuses (e.g., heterosexuals, Whites). This conflict results in unique stressors for minorities, which are experienced in addition to the stressors experienced by all others in society (e.g., financial strain, pressure to achieve). Based upon the work of Lazarus and Folkman (1984) who introduced the notion of distal (i.e., external) and proximal (i.e., internal) stressors, some sexual minority researchers have conceptualized sexual minority stress under this theoretical

framework. Specifically, that sexual minorities experience both distal stressors (e.g., sexual minority based discrimination, violence, harassment, negative and devaluing messages) and proximal stressors (e.g., IH, shame, self-hatred, concealment of identity and feelings) that are unique to and which increase the total amount of stress experienced by these individuals (Meyer, 1995, 2003; Szymanski, Kashubeck-West, & Meyer, 2008b). It is believed that individuals of minority statuses internalize, or direct inward, these negative, stigmatizing, and devaluing messages that who they are is inferior, undesirable, bad, and/or immoral (Meyer, 1995). In sexual minorities, this is referred to as IH. Higher levels of IH have been found to be significantly related to poor physical health, poor mental health, and maladaptive interpersonal outcomes (for a review, see Szymanski et al.).

In staying within his framework of minority stress theory, Meyer (2003) conducted a brief review of the literature to learn which factors, if any, appear to have the ability to ameliorate the degree to which sexual minorities experience IH. Based upon this review, Meyer found evidence to suggest that resiliency and hardiness, as demonstrated through healthy coping styles, are able to ameliorate the effect that prejudice and stress has on minorities (see Allport, 1954, and Clark et al., 1999 for greater detail). Additionally, a great deal of research evidence exists to document that secure attachment (i.e., low attachment anxiety *or* low attachment avoidance) is associated with healthier coping styles (for review see Mikulincer & Shaver, 2007). Attachment theory postulates that individuals develop expectations about themselves and others on the basis of experiences with important caregivers and subsequently develop internal working models and behavioral patterns in order to receive a sense of felt security (Bowlby, 1969/1982, 1979). In this sense, it appears that coping styles may be influenced by one's attachment, and therefore, attachment may serve to influence the degree to which sexual

minority men develop IH. Based upon this contention, examining the relation between attachment and IH may help to provide a better understanding of why sexual minority men vary in the degree to which they experience IH. Said another way, this study tested Meyer's (1995, 2003) minority stress theory by examining whether the degree to which sexual minority men internalized distal stressors associated with their sexual minority status (as evidenced through the proximal stressor of IH) was influenced by their pattern of attachment.

Purpose of the Study

It was not the intention of this study to provide further evidence of the negative outcomes of IH, as this has already been well documented. Instead, this study investigated whether the constructs of attachment and perceived social support (PSS) served to influence the level of IH in sexual minority men. It should be noted that although this study examined these two specific factors, there are many potential factors which have yet to be examined, which may influence the development of IH as well. Additionally, although not focused on in this study, other forms of concealable stigma are worthy of investigation.

Attachment as an influencing factor of internalized heterosexism. An individual's pattern of attachment begins to develop during infancy, and caries into adulthood (Bowlby, 1969, 1973). However, research evidence suggests that adults have the capacity to develop a more secure pattern of attachment through the establishment of positive adult relationships and/or through psychotherapy, and that individuals with less attachment anxiety and less attachment avoidance experience better overall health and more adaptive interpersonal functioning (see Mikulincer & Shaver, 2007 for a review). A limited number of empirical studies have examined the relation between attachment and IH in sexual minority men with evidence suggesting that

low attachment anxiety and low attachment avoidance is related to lower levels of IH (Jellison & McConnell, 2003; Sherry, 2007).

Additionally, Mohr (2008) argues that attachment insecurity influences tasks associated with sexual minority identity development, such as the self-acceptance of one's sexual orientation (i.e., IH). Based upon the work of Bowlby (1973), and coupled with the hatred and hostility perpetrated against sexual minority individuals, Mohr (2008) states that sexual minority individuals "learn to identify potential sources of threat (p.492)," and that the nature in which they do so is based upon the "fear behavioral system (p.492)" that helps to develop attachment style. This is the basis for the argument that attachment style influences how sexual minority individuals evaluate and internalize the potentially fearful messages they receive about their sexual orientation. Sexual minority individuals who are more securely attached may be more likely to evaluate the potentially fearful messages they receive concerning their sexual orientation as less threatening, thereby developing less IH. In this sense, Mohr's argument suggests that attachment influences IH; not vice versa.

Perceived social support as an influencing factor of internalized heterosexism. Similarly to attachment, PSS (i.e., the degree to which one believes others are available to provide them with support) develops over time, and is believed to have the capacity to change (Cobb, 1976; Kaplan, Cassel, and Gore, 1977). Research evidence suggests that possessing greater PSS is associated with healthier outcomes (Anderson, 1998; O'Donnell et al., 2002; Rosario, Schrimshaw, & Hunter, 2005) and more adaptive interpersonal functioning (Anders & Tucker, 2000; Elizur & Mintzer, 2003; Moller, Fouladi, McCarthy & Hatch, 2003). A limited number of studies have also examined the relation between PSS and IH in sexual minority men

with evidence suggesting that greater PSS is related to lower levels of IH (Nicholson & Long, 1990; Otis & Skinner, 1996; Shidlo, 1994, Szymanski & Carr, 2008).

Relation between attachment and perceived social support. In addition to the aforementioned reasons, the constructs of attachment and PSS were intentionally selected given that both constructs are based upon developed expectations of whether others are available to meet one's needs, and that these developed expectations may influence how one evaluates and internalizes the messages they receive. Empirically, several studies have shown that individuals with a more secure pattern of attachment experience greater PSS (see Collins & Feeney, 2004 for a review). Given this relation, both constructs were examined, with attachment (e.g., attachment anxiety, attachment avoidance) being the primary predictor variable, and PSS (e.g., family PSS, friend PSS) as the mediator variable of the relation between attachment and IH.

Chapter 2

Literature Review

This review of the literature demonstrates both conceptually and empirically that (a) low attachment anxiety and low attachment avoidance is related to greater perceived social support (PSS) and less internalized heterosexism (IH), and that (b) greater PSS is related to less IH in sexual minority men. In order to establish both conceptually and empirically that the constructs of attachment and PSS may serve to influence the degree to which sexual minority men experience IH, this chapter includes a thorough description of the constructs of IH, attachment, and PSS. A detailed critique of the empirical studies which have examined their relations (e.g., attachment and IH, attachment and PSS, and PSS and IH) follows. The chapter concludes with a summary, a list of hypotheses, and the four mediation models (see Figures 1, 2, 3 & 4).

Additionally, before continuing any further, the reader should be aware that two principles guided the writing of this chapter. First, given that some of the aforementioned constructs have been ascribed slightly different labels over the years, this literature review will report findings using the language used by its authors. However, the implications of these studies will be viewed in light of current conceptualizations. For example, the terms *heterosexism* and *internalized heterosexism* are used both when relaying findings in the literature that uses these terms and when discussing the constructs in general given that these terms reflect current conceptualization. The acronym, *IH*, when used, refers to internalized heterosexism. However, the terms *homophobia/internalized homophobia*, *homonegativity/internalized homonegativity*, and other similar terms are employed when reflected in the literature. Also, the terms *lesbian*, *gay*, *bisexual*, its acronym, *LGB*, and the other similar terms such as *homosexual(s) and non-heterosexual(s)* are used when relaying findings in the literature which uses these terms. However, in all other circumstances this author refers to these individuals as *sexual minorities*,

given the fluid, non-categorical and non-privileged nature in which members of this community define themselves (Moradi, Mohr, Worthington, Mohr, & Fassinger, 2009). This examination espouses a similar approach to the attachment literature by explicitly relaying findings which use antiquated terms (e.g., preoccupied, fearful, anxious/ambivalent; dismissing-avoidance, fearful-avoidance), although this study has conceptualized attachment in light of two orthogonal dimensions (i.e., attachment anxiety and attachment avoidance). Second, in the sections which examine the interrelations between the constructs of attachment, IH, and PSS, research findings are presented in chronological order. However, it is important to note that given the limited research that has examined these constructs, authors may not have necessarily based their studies upon previous works in this field of research.

The Constructs

The goal of this section is to provide the reader with a better understanding of the constructs of IH, attachment, and PSS to establish that (a) IH is associated with negative outcomes for sexual minority men, and therefore, it is important to develop a better understanding of how IH develops, and (b) that conceptually, attachment and PSS may influence the degree to which sexual minority men experience IH. The constructs of IH, attachment, and PSS are described, information about how the constructs have been previously and are currently understood and measured are presented, and a brief overview of the empirical outcomes associated with the constructs is offered.

Internalized heterosexism. In order to have an appreciation for the negative effects that IH has on the lives of sexual minority men, and the critical need to better understand how these effects may be mitigated, one must first develop a thorough understanding of IH and its history. In doing so, this section first describes the construct of IH, followed by a chronological timeline

of the conceptual evolution of IH, an overview of the health and interpersonal outcomes associated with IH, and an examination of how IH is measured in this study. Additionally, it is important to note that although this section discusses IH within the context of sexual minority individuals in general, the primary focus is on sexual minority men.

In terms of describing IH, it must first be noted that sexual minority individuals are thought to be confronted with stressors and forms of oppression unique to their minority sexual orientation (Meyer, 1995; Brown, 1988). Specifically, minority stress theory (Meyer, 1995) postulates that sexual minority individuals are the recipients of *heterosexism:* the negative attitudes, beliefs, messages, and devaluation directed toward those with an sexual minority sexual orientation. Subsequently, sexual minority individuals internalize and direct these negative attitudes, beliefs, messages, and devaluation toward themselves, often resulting in feelings of self-hatred, shame, and guilt, known as *internalized heterosexism* (Szymanski, 2004).

Conceptual evolution. The manner in which heterosexism and internalized heterosexism have been understood and labeled has continually evolved since 1972 when Weinberg first introduced these constructs into the scientific literature under the labels of *homophobia* and *internalized homophobia.* Homophobia is characterized as the irrational fear of being in close physical proximity to homosexuals, and internalized homophobia is characterized as the "self-loathing" attitude developed by homosexuals toward themselves through "a process exactly like the one occurring in heterosexuals who hold the prejudice against homosexuals" (Weinberg, p.74). Although Weinberg deserves credit for being the first to introduce these constructs into the scientific literature, these terms received criticism for being inaccurate, and therefore, subsequent authors felt the need to introduce their own terms. The major criticisms of Weinberg's terms included (a) homophobia is not literally a fear, but rather, a hatred, disdain, and discomfort that is

experienced by heterosexuals against homosexuals, (b) the suffix *phobia* inaccurately implies a connection to a diagnostic category on the part of those holding negative attitudes toward sexual minority individuals, and (c) the term homophobia fails to acknowledge the systemic and sociopolitical culture which devalues and oppresses those with a sexual minority orientation (Herek, 1995; Mayfield, 2001; Szymanski & Chung, 2003; Szymanski, 2004).

As a result, in 1980 Hudson and Ricketts introduced the term *homonegativism* in place of homophobia, referring to the negative attitudes and beliefs heterosexuals hold against non-heterosexuals based upon their sexual orientation. Subsequently, the term i*nternalized homonegativity* was introduced as a replacement for the term *internalized homophobia*, as Mayfield (2001) believed that it better reflected all of the negative attitudes and beliefs held against sexual minority men and lesbians, and accounted for the "societal and individual devaluation of gay and lesbian ways of living" (p.54).

In 1995, for reasons previously mentioned, Herek introduced the term *heterosexism* as a replacement for the term *homophobia* and defined it as "the ideological system that denies, denigrates, and stigmatizes any nonheterosexual form of behavior, identity, relationship, or community" (p.321). However, in doing so, Herek neither critiqued nor offered his position on the usage of the term homonegativism. Subsequently, in 2003, Szymanski and Chung introduced the term *internalized heterosexism* as an alternative to the terms internalized homophobia and internalized homonegativity in order to highlight the impact sexism has on the internalization of negative messages related to one's sexual orientation (Szymanski & Chung, 2003; Szymanski 2004; Szymanski, Kashubeck-West, & Meyer, 2008a).

In summary, since the constructs of heterosexism, and internalized heterosexism were first introduced into the scientific literature by Weinberg in 1972 (as *homophobia* and

internalized homophobia), the conceptualization and labeling of these constructs have evolved. The original conceptualization of heterosexism and internalized heterosexism has experienced a shift. Initially, these terms characterized homophobia. However, the current conceptualization of heterosexism is viewed as the negative and devaluing messages society and its members perpetrate against those failing to adhere to a heterosexual standard. Subsequently, the current conceptualization of internalized heterosexism refers to the processes by which sexual minority individuals direct these negative and devaluing messages inward.

Additionally, although previous studies have conceptualized and labeled IH as internalized homophobia and internalized homonegativity, the items housed within the psychometric instruments which were developed to measure internalized homophobia and internalized homonegativity are actually consistent with the current conceptualization of internalized heterosexism. As a result, researchers proposing new studies which replicate and advance findings in the area of internalized heterosexism often justify their current studies based upon past research findings under the labels of internalized homophobia, and internalized homonegativity (Szymanski, Kashubeck-West, & Meyer, 2008b). It is crucial to gain an awareness of these findings in order to underscore the importance for the need to develop a better understanding of how IH may be influenced in sexual minority men.

Empirical correlates of internalized heterosexism. IH is a well-studied construct and much research evidence has been gathered to suggest that IH is related to poor outcomes in sexual minority men. This subsection demonstrates that a great deal of evidence suggests that IH in sexual minority men is related to poor health, and second, to poor interpersonal functioning. However, the factors which may serve to mitigate the level to which sexual minority men develop IH have not been well studied. It is particularly relevant to examine the relation between

IH and interpersonal functioning in sexual minority men given this study investigated whether the constructs of attachment and PSS (both of which are highly related to interpersonal functioning) served to mitigate IH in sexual minority men. Studies which have examined the relation between attachment and IH, and PSS and IH, are examined later in this chapter.

Much research evidence suggests that IH is associated with poor health outcomes in sexual minority men. Szymanski, Kashubeck-West, and Meyer (2008b) published a thorough and comprehensive literature review of the major psychosocial correlates of IH, focusing on the empirical studies which have examined IH outcomes. In providing an overview, numerous studies offer evidence that IH is significantly related with low self-esteem (Alexander, 1986; Allen & Oleson, 1999; Frederick, 1995; Herek et al., 1998; Lima, Lo Presto, Sherman, & Sobelman, 1993; Linde, 2002; Rowen & Malcolm, 2002; Shidlo, 1994; Szymanski & Gupta, 2009), depression (Alexander, 1986; Herek et al., 1998; Shidlo, 1994; Wagner et al., 1996; Zuckerman, 1998), increased likelihood of engaging in risky sexual behavior (Stokes & Peterson, 1998; Ratti, Bakeman, & Paterson, 2000; Vincke, Bolton, Mak, & Blank, 1993), psychological distress (Rostosky, Riggle, Horne, & Miller, 2009; Szymanski & Gupta, 2009), shame (Allen & Oleson, 1999), demoralization (Herek et al., 1998; Meyer, 1995), sexual identity and gender role conflicts (Mayfield, 2001; Rowen & Malcolm, 2002), and suicidal ideation and behavior (Meyer, 1995). Please refer to Szymanski, Kashubeck-West, and Meyer (2008b) for a more comprehensive review.

Of particular relevance to this study is the existing research evidence suggesting that IH is related to poor interpersonal functioning in sexual minority men. Several studies suggest that sexual minority men who experience greater amounts of IH experience interpersonal problems that might hinder their ability to form and maintain lasting and satisfying relationships.

Specifically, research evidence suggests that sexual minority men experiencing greater IH have a greater fear of intimacy (Frederick, 1995), greater difficulty expressing their emotions (Ervin, 2004; Sanchez, 2005; Szymanski & Carr, 2008), and greater difficulty showing affection (Ervin, 2004; Sanchez, 2005; Szymanski & Carr, 2008). As a result, it is not surprising that sexual minority men experiencing greater IH also experience increased loneliness (Frost & Meyer, 2009), as well as discontent with their intimate relationships, as measured by less relationship satisfaction (Ross & Rosser, 1996), a lower sense of relationship connectedness (Frost & Meyer, 2009), greater relationships strain (Frost & Meyer, 2009), and decreased sexual satisfaction (Frost & Meyer, 2009; Goldberg, 1988; Rosser, Metz, Bockting, & Buroker, 1997).

In summary, the aforementioned studies in this subsection provide overwhelming evidence to suggest that IH is associated with poor health outcomes, as well as poor interpersonal functioning in sexual minority men, both of which may influence the degree to which sexual minority men experience relationship self-efficacy. However, regardless of how persuasive the aforementioned studies may have been in suggesting that IH is associated with poor outcomes in sexual minority men, it is somewhat difficult to compare these studies with each other, as they used different assessment tools to measure IH, with varying degrees of psychometric validation. Given the conceptual evolution of IH, as previously discussed, it is also important to examine the psychometric evolution of IH in order to justify how IH was measured in this study.

Measurement. To date, no measure has been developed to explicitly measure internalized heterosexism. Rather, scales which have been developed to measure internalized homophobia and internalized homonegativity are currently being implemented in studies which present findings under the label of internalized heterosexism (Kashubeck-West & Szymanski, 2008; Szymanski & Chung, 2003). However, the measures developed under the labels of internalized

homophobia and internalized homonegativity contain items which are consistent with the construct of internalized heterosexism. Several scales have been developed over the past few decades to asses IH among sexual minority men (e.g., Nungesser Homosexuality Attitudes Inventory, Nungesser, 1983; Internalized Homophobia Scale, Martin & Dean, 1987; Internalized Homophobia Scale, Wagner, Brondolo, & Rabkin, 1996, and Wagner, Serafini, Rabkin, Remien, & Williams, 1994; Internalized Homonegativity Inventory, Mayfield, 2001), although these scales have predominately gained psychometric validation with European American, college-educated, middle-to-upper class gay men. Given that IH is believed to be experienced differently by sexual minority men and women due to gender roles (Szymanski, Kashubeck-West, & Meyer, 2008a), IH scales have thus far been developed to be used exclusively with either sexual minority men or women, but not both, in which the vast majority of scales have disproportionately been developed to be used with gay men (Szymanski, Kashubeck-West, & Meyer, 2008b).

Two predominant measures to assess internalized heterosexism among sexual minority males have emerged in the most recent literature: Mayfield's (2001) Internalized Homonegativity Inventory (IHNI) and Herek, Cogan, and Gillis's (2000) short form of Martin and Dean's (1987) Internalized Homophobia Scale (IHP). The IHNI consists of 23-items with three subscales measuring one's view of one's own homosexuality, the view one has about the homosexuality of others, and the morality of homosexuality. Mayfield reported an internal consistency coefficient alpha of .91 for the entire scale. The IHP was originally developed to assess the criteria for the Dsexual minority-III (1980) diagnosis of ego-dystonic homosexuality and originally contained 9-items. Herek, Cogan, and Gillis revised the IHP to include only 5-items, and offered that it had acceptable validity as evidenced by its significant correlation with

the original IHP. Although evidence of the reliability of the IHP short form was not offered by its authors, Kashubeck-West and Szymanski (2008) found an alpha coefficient of .88 for a sample of gay and bisexual men.

Both the IHNI and the IHP short form are acceptable measures of IH to be used with sexual minority men. However, given that the vast majority of studies which have used the IHP short form have also used a second measure of IH within its study, it appears that researchers are not comfortable using the IHP short form as the sole measure to assess IH in gay men. The opposite is true with the IHNI, as many studies have used it as its sole measure of IH. Therefore, the IHNI was used to measure IH in this study. The IHNI is described and critiqued in greater detail in chapter three of this manuscript.

Summary. Internalized heterosexism has been a well-studied construct since its inception in 1972 by Weinberg who first introduced it as homophobia. The term continued to be relabeled (e.g., homonegativism; internalized heterosexism) due to evolving beliefs about its conceptualization. Hence, the manner in which internalized heterosexism has been conceptualized, labeled, and measured has changed over time. Currently, the construct of *internalized heterosexism* is conceptualized as the process by which sexual minority individuals direct heterosexism inward (i.e., the negative and devaluating messages society and its members perpetrates against those failing to adhere to a heterosexual standard).

Although no specific measure has been developed to explicitly measure IH under its current conceptualization and label, previous research which offers findings under the labels of *internalized homophobia* and *internalized homonegativity*, respectively, provide a relevant basis to justify current research for internalized heterosexism, given that the items housed within these antiquated measures are consistent with the current conceptualization of IH. To date,

overwhelming empirical evidence suggests that IH in sexual minority men is associated with poor health and interpersonal outcomes. However, only limited research attention has been paid to factors which may influence the degree to which sexual minority men experience IH. Several studies have examined the relation between IH and (a) attachment, and (b) perceived social support (studies which examine these relations are the focus of later sections of this chapter), with evidence suggesting that low attachment anxiety, low attachment avoidance, and greater PSS is related to less IH. Therefore, this study examined whether attachment and PSS influenced the degree to which sexual minority men experienced IH. Further information about these constructs are offered below.

Attachment. Although much empirical evidence exists to suggest that IH is related to poor outcomes, little evidence exists which explains why sexual minority individuals develop IH in general, and to varying degrees (Bieschke, 2008). Given the large body of attachment literature which suggests that low attachment anxiety and low attachment avoidance is related to many positive outcomes, examining the relation between attachment and IH may provide insight into understanding how sexual minority males develop IH. And although attachment and IH are different constructs, they share the common theme of developed expectations. Infants develop beliefs and expectations about themselves and others (i.e., cognitive working models) based upon the responses of their caregivers during moments of need and distress. These expectations influence the development of attachment styles in infancy which continues into adulthood (Bowlby, 1979). Similarly, given the heterosexist society in which we live, sexual minority men develop expectations about how they will be viewed by others in society based upon their sexual orientation, which impacts how they view themselves (i.e., IH). Given that securely attached individuals have likely developed expectations that others are available for support and

assistance, it may be conceivable that securely attached sexual minority males are less likely to internalize the messages that who they are, based upon their sexual orientation, is "less than," resulting in less IH.

In order to establish that attachment style may influence the degree to which sexual minority men develop IH, and subsequently, the harmful interpersonal outcomes associated with IH in sexual minority men, this section describes attachment in both the context of infancy and adulthood. The subsection on attachment in adulthood describes attachment as existing along the two orthogonal dimensions of attachment anxiety and attachment avoidance, and further describes the experience of attachment by sexual minority adults. Next, the manner in which attachment was measured in this study is discussed. Last, this section provides a brief overview of the positive interpersonal outcomes associated with low attachment anxiety and low attachment avoidance.

In terms of describing attachment, it is important to first note that a pattern of attachment begins to develop when infants develop bonds with their caregivers immediately after birth. The bonds that are developed with caregivers greatly influence one's attachment pattern which continues into adulthood and throughout life. Therefore, attachment is believed to exist among all adults regardless of sexual orientation, and influences interpersonal relationships with significant others. The next sections further discuss attachment in the context of infancy, adulthood, and sexual minority adults.

Attachment in infancy. Infants are born with an innate desire to seek out, establish, and maintain close affectional bonds of attachment with others, especially their caregivers (Bowlby, 1969/1982). The development of such bonds increases the likelihood of survival, as infants depend on others to meet their needs at this stage of life, especially during moments of distress

(Bowlby, 1969/1982; 1979). Infants also have a natural propensity to maintain close physical proximity to their caregivers, as this provides infants with a sense of *felt security*, known as a *secure base* in which to explore their immediate environment, and a *safe haven* to which to return if they experience distress (Bowlby, 1969/1982). As a result of the caregivers' response in moments of distress, infants develop expectations as to whether they can trust others in the world to care for and protect them (Bowlby, 1969/1982). These expectations lead to the development of internal working models (IWMs), which are the mental representations or beliefs individuals develop about themselves (e.g., ability to accomplish tasks; sense of worth), their environment, and others in the world (e.g., their understanding of how attachment figures may respond during moments of distress). Hence, IWMs provide individuals with a framework in which to make behavioral decisions, view their own abilities, establish goals, and make predictions about the reactions of others for the purpose of maintaining a sense of felt security (Bowlby, 1969/1982). As a result, IWMs greatly influence how individuals feel about themselves (e.g., self-worth, self-esteem, self-efficacy; Bowlby, 1973) and others (e.g., propensity to trust, propensity to seek out support and/or avoid others; Bowlby, 1973). This is significant because IWMs and attachment patterns developed in infancy continue into adulthood (Bowlby, 1979), as the innate desire of humans to establish and maintain attachment bonds to others, whether it be to parents, peers, significant others or their community, continues throughout life "from the cradle to the grave" (Bowlby, 1979, p.129).

Attachment in adulthood. Attachment in adulthood, commonly referred to as "adult romantic attachment" by Mohr (2008) who has examined attachment among sexual minority individuals, encompasses not merely the attachment pattern adults have with their romantic partners, but also, the attachment they have as adults to their respective parents, peers, and

community. In this context, Hazan and Shaver (1987) offered that, "romantic love is an attachment process (a process of becoming attached), experienced somewhat differently by different people because of variations in their attachment histories" (p. 511). The propensity, desire, and utility of these attachments with others, Bowlby (1969) contended, is that they serve to provide protection, support, and care during moments of distress, based upon physical, emotional, financial, and other safety needs.

Moreover, Bowlby (1973) argued that although adult attachment is rooted in infancy, attachment is not an inflexible phenomenon incapable of change or adaptation. Bowlby believed that regardless of a person's age, his/her attachment pattern at any given moment is the product of his/her core attachment developed during infancy which has been influenced by experiences with significant others and attachment figures, and by varying social and developmental circumstances. This suggests that an individual's relationship, as an adult, with his/her psychotherapist and significant others has the ability to change his/her attachment pattern.

Attachment anxiety and attachment avoidance. The current conceptualization of attachment in adulthood exists along two orthogonal continua: attachment anxiety and attachment avoidance (Brennan, Clark, & Shaver, 1998). Attachment anxiety refers to the fear of being rejected and abandoned. Individuals experiencing high degrees of attachment anxiety experience an excessive desire to be close to and supported by others and experience intense emotional distress when they fear that others are in the process of rejecting, abandoning and/or failing to support and care for them. Attachment avoidance refers to the fear of intimacy and dependence. Individuals experiencing high degrees of attachment avoidance experience a desire to emotionally and physically distant themselves from others in order to maintain their self-reliance as they experience difficulty trusting and depending on others during moments of

distress. Individuals experiencing high degrees of attachment anxiety and attachment avoidance experience a pull-push cycle in which they pursue others to feel close and supported, but push away when this feeling becomes too intense, as this threatens their sense of independence and self-reliance. This cycle is perpetuated when this pushing away result in a sense of emotional and physical distance, and individuals compensate by pursing others once again (Mikulincer & Shaver, 2007).

More recently, attachment theory has focused on the examination of attachment along the orthogonal dimensions of attachment anxiety and attachment avoidance (Brennan, Clark, & Shaver, 1998), although previous literature (Bartholomew & Horowitz, 1991; Hazan & Shaver, 1987) focused on attachment categorically, based upon the combination of attachment anxiety and attachment avoidance. Mikulincer, Shaver, and Pereg (2003) offered the following translational scheme from categorical to dimensional views of attachment: (a) secure attachment (i.e., low attachment anxiety and low attachment avoidance), (b) preoccupied/anxious attachment (i.e., high attachment anxiety and low attachment avoidance), (c) dismissing-avoidant attachment (i.e., high attachment avoidance, and low attachment anxiety, and (d) fearful-avoidant attachment (i.e., high attachment anxiety and high attachment avoidance). As just described, unique attachment patterns emerge when various levels of attachment anxiety and attachment avoidance are combined. For example, two types of avoidant attachment styles have been previously examined in the literature. In general, a fearful-avoidant attachment pattern is characterized by the vacillation between interpersonal closeness and independence, while a dismissing-avoidant attachment pattern is primarily characterized by independence from others (Bartholomew & Horowitz, 1991). Although both avoidant attachment patterns are indicated by a high score on attachment avoidance, they differ in the amount of attachment anxiety that is present.

Attachment in sexual minority adults. The application of attachment theory to understanding and explaining attachment among sexual minority individuals, commonly referred to as "same-sex adult romantic attachment" is in its infancy, both conceptually and empirically, as the vast majority of studies examining adult romantic attachment have done so with heterosexual samples (Mohr, 2008). However, some studies have provided evidence that attachment operates similarly among heterosexuals and sexual minority individuals. In one of the first set of investigations to examine whether a distinction in attachment exists based upon sexual orientation, Ridge and Feeney (1998) collected data from both heterosexual (number not reported) and sexual minority college students (77 gay males; 100 lesbian women) in Australia. In comparing gay males with heterosexual males, these authors found no significant difference in the frequency or distribution of the attachment types. Along similar lines, in examining whether heterosexual and sexual minority couples differed in their attachment patterns, Kurdek (1997, 2002) found no significant difference. Additionally, in studying differences between heterosexual and sexual minority couples, Mohr and Fassinger (2007), Kurdek (2005), and Peplau and Spalding (2003) have found that no significant differences exist in the development of love, relationship satisfaction, and commitment between heterosexual and sexual minority couples, offering evidence that same-sex attachment not only exists, but functions similarly to the attachment experienced by heterosexuals.

These recent findings offer a stark contrast to previous views that same-sex behavior, relationships, and attachment is deviant, degenerative, and pathological (Mohr, 2008) as evidenced by the "mental disorder" of "ego-dystonic homosexuality" in the third edition of the *American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders* (Dsexual minority-III, 1980) which was removed in 1987 with the publication of the Dsexual

minority-III-R. Instead, Mohr suggests that the current body of literature provides evidence for the argument that there may be more similarities than differences in attachment between heterosexuals and sexual minority individuals, and that differences in attachment between heterosexuals and sexual minority individuals may have more to do with one's IWM than it does with one's sexual orientation.

Measurement. The current trend among attachment researchers is to conceptualize adult attachment existing along the two orthogonal dimensions of attachment anxiety and attachment avoidance as previously discussed. Therefore, this study measured attachment in this manner. In doing so, the Experiences in Close Relationship Scale (ECR; Brennan, Clark, & Shaver, 1998) was employed. Given its strong psychometric validity, and its ability to measure attachment anxiety and attachment avoidance, the ECR is widely viewed by attachment experts as the leading scale in the field today for measuring attachment. The ECR is further described and critiqued in chapter three of this manuscript.

Empirical correlates of attachment. Much research has documented that low attachment anxiety and low attachment avoidance is associated with greater overall health and adaptive functioning (see Mikulincer & Shaver, 2007 for review). Moreover, of particular relevance to this study, low attachment anxiety and low attachment avoidance has also been documented in the scientific literature as being significantly related to many positive interpersonal outcomes. First, research suggests that individuals with low attachment anxiety and low attachment avoidance display healthier interpersonal regulation. Specifically, in comparison to those who are insecurely attached, securely attached individuals find conflict less distressing and threatening, feel better apt to manage conflicts when they occur, and are more likely to compromise (Corcoran & Mallinckrodt, 2000; Creasey & Hesson-McInnis, 2001; Pistole, 1989).

Therefore, it is not surprising that securely attached individuals report less loneliness (Gillath, Bunge, Shaver, Wendelken, & Mikulincer, 2005; Wei, Russell, & Zakalik, 2005; Wei, Shaffer, Young, & Zakalik, 2005) than those who are insecurely attached.

Research has also provided evidence to suggest that securely attached individuals experience healthier interpersonal functioning compared to those who are insecurely attached. Specifically, securely attached individuals report greater intimacy in their relationships (Treboux, Crowell, & Waters, 2004; Knobloch, Soloman, & Cruz, 2001; Whiffen, Kerr, & Kallos-Lilly, 2005), are more committed to their partner (Himovitch, 2003; Treboux et al.; 2004; Tucker & Anders, 1999), and are more likely to be empathic, affectionate, compromising, and less likely to be attacking during conflicts (Alexandrov, Cowan, & Cowan, 2005; Creasey & Ladd, 2005; Roisman, Padron, Sroufe, & Egeland, 2002). Additionally, research evidence also suggests that securely attached individuals experience greater satisfaction, both in their dating relationships (Frei & Shaver, 2002; Shaver, Schachner, Mikulincer, 2005; Williams & Riskind, 2004) and in their marriages (Alexandrov et al.; Shields, Travis, & Rousseau, 2000; Treboux et al.).

The aforementioned studies in this subsection provide overwhelming evidence to suggest that low attachment anxiety and low attachment avoidance is significantly related to healthy interpersonal regulation and functioning, which may conceivably influence the degree to which sexual minority men experience relationship self-efficacy. However, regardless of how persuasive the aforementioned studies may have been in suggesting that secure attachment is related with healthy interpersonal outcomes, it is somewhat difficult to compare these studies with each other, as some studies assessed attachment dimensionally, while others assessed attachment categorically, with varying degrees of psychometric validation of measures used. Nonetheless, as a whole, this body of scientific literature is convincing in suggesting that low

attachment anxiety and low attachment avoidance is related to better overall health and interpersonal functioning.

Summary. Infants develop beliefs and expectations about themselves and others (i.e., internal working models) based upon the responses of their caregivers during moments of need and distress. These expectations influence how infants feel about themselves, others, and the world around them in an attempt to develop an understanding of how to behave (e.g., whether or not to trust others) for the purpose of achieving a sense of felt security. Additionally, these beliefs and expectations influence the development of attachment styles in infancy which continues into adulthood. The current view among attachment experts is that adults experience attachment along two orthogonal dimensions: attachment anxiety and attachment avoidance. Experiencing low attachment anxiety and low attachment avoidance is considered *secure attachment*, and experiencing high attachment anxiety and/or high attachment avoidance is considered *insecure attachment*. Attachment experts contend that one's attachment pattern (i.e., the combination of low or high attachment anxiety and attachment avoidance) is capable of changing over time through interpersonal relationships with significant others and/or psychotherapy. Moreover, emerging research suggests that attachment patterns are experienced similarly by heterosexual and sexual minority adults, in which roughly the same percentage of heterosexuals and sexual minority adults are securely attached. Additionally, interpersonal functioning is similar between heterosexuals and sexual minority individuals when they experience a similar attachment pattern. Currently, one primary measure of attachment has emerged as the leading tool to assess attachment as existing along the two orthogonal dimensions of attachment anxiety and attachment avoidance (ECR; Brennan et al., 1998). Overwhelming research suggests that low attachment anxiety and low attachment avoidance is significantly

related with healthy functioning as well as positive interpersonal regulation and functioning, therefore providing a basis for the argument that attachment may serve as an influencing factor in the development of IH in sexual minority men; specifically, that possessing low attachment anxiety and low attachment avoidance may lessen the degree to which sexual minority men experience IH.

In reviewing additional scientific literature in the attempt to reveal additional factors that may serve to influence the degree to which sexual minority men develop IH, numerous constructs related to interpersonal functioning were explored. One construct that emerged as a result of this search was perceived social support (PSS). The body of scientific literature on PSS provides evidence to suggest that greater PSS is related to better health and more adaptive interpersonal functioning. Therefore, like secure attachment, possessing greater PSS may also serve as a potential influencing factor in the development of IH in sexual minority men.

Perceived social support. Attachment and PSS are similar in that they are both based upon developed expectations of whether others are available to meet ones' needs. Specifically, based upon the responses of their caregivers during moments of need and distress, infants develop expectations about whether they can trust others to be available to them to meet their needs. These expectations help infants establish a sense of "felt security" which greatly influence the degree to which they establish secure attachment. Similarly, PSS is the degree to which one perceives that others are available to offer support and care. Given that securely attached individuals are more likely to trust others to meet their needs, it is conceivable that securely attached individuals experience greater PSS. However, attachment and PSS differ given that attachment represents a pattern of relating and knowing oneself and the world around them, while PSS is based upon one's perception (regardless of how accurate) of how supportive others

are in their world. Nonetheless, PSS, like attachment, may also serve as an influencing factor in the development of IH in sexual minority men.

In order to establish the plausibility that PSS may serve to mitigate IH, and subsequently, the harmful interpersonal outcomes associated with IH in sexual minority men, this section first provides a thorough description of PSS by comparing it with the construct of *social support*. Then, the social support networks of sexual minority men are examined in light of familial and non-familial supports, followed by a brief overview of the positive interpersonal outcomes associated with greater PSS. Last, the manner in which PSS has been measured in this study is discussed.

Fist, it is important to describe PSS. As a result of the ongoing discrimination and lack of acceptance of sexual minority individuals by the heterosexist society in which we live (Szymanski, Kashubeck-West, & Meyer, 2008b), sexual minority men are faced with the dilemma of deciding who, how, and when, if ever, to disclose their sexual orientation (Coleman, 1982). This internal struggle creates a sense of isolation, loneliness, and desire among sexual minority men to hide their true identity from others, which impedes their ability to establish meaningful and caring social supports (Grossman & Kerner, 1998). However, what exactly is social support? One of the earliest explicit accounts of the term *social support* in the scientific literature occurred in 1976 when Cobb described it as the "information leading the subject to believe that he is cared for and loved, esteemed, and a member of a network of mutual obligations" (p.300). Additionally, Kaplan, Cassel, and Gore (1977) offered their definition of social support as the degree to which one's psychosocial needs are met through their interpersonal relations with others, and is based upon the individual, the environment, and the interaction between the two.

Although the term *social support* is used by the aforementioned authors, their definitions appear to be describing *perceived social support*, given that Cobb's (1976) definition is based upon ones' "belief" (i.e., perception) that he/she is cared for, and that Kaplan, Cassel, and Gore's (1977) definition is based upon whether one perceives to have his/her needs met by others. Therefore, although these aforementioned definitions were offered under the label of *social support*, they are actually applicable to PSS given that PSS refers to the degree to which individuals perceive that others are available to provide them with support. It is important to note that although the definition of PSS is consistent with the definition of social support in previous literature, PSS and social support are actually distinct phenomena. For example, an independent observer could interview an individual and conclude that he/she has a large social support network (e.g., partner, family members, friends, community resources) to which he/she can turn to for support. This would be an example of an objective assessment of social support. However, if this individual does not perceive these supports to exist, then he/she may report low PSS on a measure of PSS, indicating that the amount of social support an individual reports is based upon his/her perceptions. Hence, social support and PSS are different constructs.

However, it is the perception, not the objective assessment of one's social support that is of interest given that one's perception of whether others are available to meet his/her needs (which is inherent to both attachment and PSS) has been examined in this study as a potential influencing factor of IH in sexual minority men. Therefore, findings from previous empirical studies of social support, which used measures that assessed one's perception of social support, are relevant to justifying current PSS research. In examining these findings, the social support networks of sexual minority men have largely been studied in light of familial and non-familial

supports, and the majority of findings suggest that sexual minority men rely more heavily upon non-familial supports.

Familial and non-familial perceived social support. Several studies have examined the social support networks of sexual minority men within the context of familial (e.g., parents, children, siblings, extended family members/relatives) and non-familial (e.g., peers, friends, romantic partners, co-workers, community/organizations, therapists) members. These studies have documented that sexual minority men routinely report that their social support networks are comprised of both familial and non-familial members. However, research evidence largely suggests that the social support networks of gay men are disproportionately comprised of non-familial members (Grossman, D'Augelli, & Hershberger, 2000; Grossman & Kerner, 1998; Kurdek, 1988). Whether this is the result of a limited number of potential familial members compared to an unlimited number of potential non-familial members, or the result of sexual minority men choosing to have more non-familial members in their social support networks is not clear.

Several studies provide evidence to suggest that sexual minority men comprise their social support networks largely with non-familial members because they perceive these members to be more supportive (Anderson, 1998; Kurdek & Schmitt, 1987; Mufioz-Plaza, Quinn, & Rounds, 2002) and receive greater satisfaction from their relationships with these non-familial members (Grossman & Kerner, 1998) as compared to the familial members in their social support networks. To some degree, these findings are not necessarily surprising, given that sexual minority men do not have the ability to choose the members of their family-of-origin, but do have the ability to choose the non-familial members of their social support networks. The degree to which sexual minority men are able to choose the members of their social support

networks may greatly influence the degree of support they experience, potentially accounting for the findings that sexual minority men largely report greater PSS and satisfaction with the non-familial members of their social support networks. Moreover, it is also important to understand how PSS is experienced by sexual minority men because many studies provide evidence to suggest that greater PSS is associated with healthier interpersonal outcomes.

Measurement. Recent studies which have assessed PSS among sexual minorities have predominately used either Sarason, Sarason, Shearin, and Pierce's (1987) short form of the Social Support Questionnaire (SSQ6) or Procidano and Heller's (1983) Perceived Social Support (PSS) scale. Both measures have strong psychometric validity and reliability and are comprised of items which are based upon one's perception of his/her social support. However, given that previous research has documented that sexual minority men have social support networks which are largely comprised of non-familial members which they perceive to be more supportive and satisfying, this study employed a measure of PSS which examined familial and non-familial supports separately in order to avoid conflating PSS results. Given that the PSS scale offers separate subscales that explicitly assess familial and non-familial PSS, while the SSQ6 does not, the PSS scale was used. This scale is described and critiqued in greater detail in chapter three of this manuscript.

Empirical correlates of perceived social support. Much research has documented that greater PSS is associated with better overall health (Anderson, 1998; Kurdek, 1988; Kurdek & Schmitt, 1987; O'Donnell et al., 2002; Rosario, Schrimshaw, & Hunter, 2005; Schaefer, Coyne, & Lazarus, 1981; Uchino, Cacioppo, & Kiecolt-Glaser, 1996). Additionally, of particular relevance to this study, much research evidence suggests that greater PSS is also associated with positive interpersonal functioning. Specifically, the scientific literature documents that

individuals experiencing greater PSS possess greater interpersonal skills (Anders & Tucker, 2000; Cohen, Sherrod, & Clark, 1986), are more socially connected to others (Moller, Fouladi, McCarthy & Hatch, 2003), are less lonely (Moller et al.; Pierce, Sarason, & Sarason, 1991), and experience their relationships as more satisfying (Elizur & Mintzer, 2003) and of greater quality (Pierce et al.) as compared to individuals experiencing less PSS. However, although these studies provide evidence to suggest that greater PSS is associated with healthy interpersonal functioning, it is somewhat difficult to compare these studies with each other, as they used different assessment tools to measure PSS with varying degrees of psychometric validation.

Summary. PSS refers to the degree to which individuals believe others are available and willing to provide them with support to help meet their needs. PSS is based upon the construct of social support in which it shares a similar definition. However, the constructs of PSS and social support are distinct in that social support can be objectively assessed by an independent observer, whereas PSS is based upon one's own subjective perceptions of his/her social support which may or may not reflect the actual support an individual experiences, as assessed by an objective observer/interviewer. Much research evidence suggests that sexual minority men experience a social support network that is comprised of both familial and non-familial members. However, additional research evidence documents that the social support networks of sexual minority men are largely comprised of non-familial members with whom they experience greater PSS and satisfaction as compared to familial members. And although it is not clear why sexual minority men have a different social support experience with familial and non-familial members, it is important to understand, as much research evidence suggests that sexual minority men who experience greater PSS also experience healthier interpersonal functioning. However, it is difficult to compare these findings with one another, as these studies employed different

psychometric instruments to assess PSS in sexual minority men, with varying degrees of psychometric validation.

Section summary. The goal of this section was to demonstrate that (a) IH is associated with poor outcomes for sexual minority men, and therefore, it is important to better understand what factors may serve to influence it, and (b) that conceptually, attachment and PSS may serve as influencing factors in the development of IH in sexual minority men. With regard to the first goal, empirical research evidence was offered to demonstrate that sexual minority men experiencing higher levels of IH also experience more negative outcomes. Second, this chapter has also established a conceptual basis to suggest that attachment and PSS may serve as influencing factors in the development of IH in sexual minority men. Specifically, empirical research findings offered in this chapter document that low attachment anxiety, low attachment avoidance, and high PSS are related to better health and more adaptive interpersonal functioning. Although the two primary goals of this section were accomplished, an empirical basis is needed which documents that low attachment anxiety, low attachment avoidance, and greater PSS is related to less IH in sexual minority men. The following section of this chapter serves to provide this basis.

Empirical Relations between Constructs

This section provides the empirical basis to suggest that attachment anxiety, attachment avoidance and PSS may influence the degree to which sexual minority men experience IH. This empirical basis is established by documenting empirical research evidence of statistically significant relations between (a) attachment and IH, (b) attachment and PSS, and (c) PSS and IH. Each subsection which examines these specific empirical relations offers descriptions and critiques of relevant studies in order to offer implications for this study. The studies in these

subsections are introduced in chronological order of publication, although it is important to note that given the lack of research which has examined the relations between these constructs, authors may not have based their studies on previous works.

Additionally, it should be noted that for the majority of studies described in this section, the authors did not focus their investigations on the relations between the constructs that are examined in this study (e.g., attachment and IH, attachment and PSS, PSS and IH), but rather, on the relation between these constructs and other constructs embedded within more complex mediation, moderation and other models and research designs. However, the authors that conducted the studies that are described in this section nonetheless provided empirical data of the relations that are of interest in this study. These findings are highlighted in order to provide an empirical basis for this study, although they are usually not the key findings of the studies. Readers should refer to the original publication of these studies for a more thorough review of their intended investigations.

Attachment and internalized heterosexism. The body of empirical literature which has examined the relation between attachment and IH has only recently begun to emerge. To date, only two empirical studies have examined the relation between attachment and IH in sexual minority men, although both provide evidence to suggest that securely attached sexual minority men experience less IH. This general finding is discussed in greater detail at the end of this subsection in light of the strengths and weaknesses of these two studies.

In 2003, Jellison and McConnell examined the relation between attachment, self-disclosure of sexual orientation, and self-esteem, and further, whether IH mediated this relation among a sample of 40 gay men (48% from a large Midwestern university; 52% from a suburban area in the southwest), most of whom were Caucasian (no percentage provided), ranging in age

from 19 to 63 years (M = 31.8; SD = 10.69). Of relevance to this study, attachment was measured by the Attachment Style Measure (Hazan & Shaver, 1997) which asked respondents to rate the degree to which they felt their feelings concerning their social relationships corresponded to three attachment styles (i.e., secure, avoidant, anxious/ambivalent) on a 7-point Likert-type scale from 1 (completely unlike me) to 7 (completely like me). No psychometric information for the measure was provided. Internalized heterosexism was assessed by the Nungesser Homosexual Attitudes Inventory (NHAI; Nungesser, 1983). An alpha coefficient of .88 was reported for the full scale (NHAI-Overall). The NHAI consists of three subscales: attitudes towards one's own sexual orientation (NHAI-Self; Cronbach alpha = .71 for 10 items; e.g., "Whenever I think a lot about being gay, I feel critical about myself"), attitudes about disclosing one's sexual orientation to others (NHAI-Disclosure; Cronbach alpha = .88 for 14 items; e.g., "It is important for me to conceal the fact that I am gay from most people"), and attitudes toward homosexuality in general (NHAI-General; Cronbach alpha = .45 for 10 items; e.g., "Homosexuality is not as satisfying as heterosexuality"). Respondents were asked to rate each item on a 5-point Likert-type scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Items were reversed scored such that higher scores indicated more positive attitudes towards ones' own sexual orientation (i.e., lower IH). Shidlo (1994) found strong evidence for the validity of the NHAI.

Preliminary data analysis indicated that scores on the measures did not significantly differ between those sampled from the university, and those sampled from the suburban area. Therefore, further analysis was conducted on the full sample. The major finding of this study was that gay men who were securely attached were found to have less IH, and that having less IH was found to mediate the relation between secure attachment, self-esteem, and self-disclosure

of sexual orientation. Of particular relevance to this study, the authors found statistically significant relations between secure attachment and NHAI-Overall (r = .40; p < .05), NHAI-Self (r = .44; p < .01), and NHAI-General (r = .40; p < .05), but not NHAI-Disclosure. No data analysis was reported concerning the relation between insecure attachment and scores on the NHAI. Furthermore, it is important to note that these results are based upon a predominately Caucasian sample (n = 40), and an antiquated measure of attachment (e.g., self-report, not based upon the current two-dimension conceptualization of attachment anxiety and attachment avoidance), and therefore, may have questionable validity to this study given the current conceptualization of attachment, and limited generalizability to a general population of gay men. An additional limitation of this study is that the authors failed to account for the potential confounding variable of age, or generational effect, given that their sample included a wide range of ages. With these limitations in mind, these results nonetheless provide evidence to suggest that secure attachment is associated with lower levels of IH (but not disclosure of sexual orientation).

In 2007, Sherry examined the relation between attachment, internalized homophobia, shame, and guilt among a sample of 286 sexual minority individuals (59% female; 84% European American; 95% having at least some college) self-identifying as lesbian (41%), gay (39%), bisexual (19%) or questioning (1%), ranging in age from 16 to 83 years (M = 31.5). The Internalized Homophobia Scale (IHS; Ross & Rosser, 1996) measured IH and was found to have good internal consistency with the current sample (Cronbach alpha = .74). The Harder Personal Feelings Questionnaire (PFQ2; Harder & Zalma, 1990) measured shame (Cronbach alpha = .85) and guilt (Cronbach alpha = .83). The Relationship Scales Questionnaire (RSQ; Griffin & Bartholomew, 1994) measured attachment (Cronbach alpha = .79 for attachment anxiety, .87 for attachment avoidance).

Sherry (2007) employed a canonical correlation analysis to examine the four attachment prototypes (i.e., secure, preoccupied, fearful-avoidance, dismissive-avoidance; Bartholomew, 1990) relative to the other constructs. The results showed the following squared canonical correlations (R^2c): 0.346 for shame, 0.031 for guilt, and 0.005 for internalized homophobia. Using Wilk's Lambda criterion, the full model was found to be statistically significant. The major finding of this study was that attachment accounted for 37% of the variance in scores among shame, guilt, and internalized homophobia. Of particular relevance to this study, IH was most highly correlated (negatively) with secure attachment (r = -.411), followed by fearful-avoidance (r = .262), preoccupied (r = .150), and dismissing-avoidance (r = .119). However, data analysis was not conducted to determine whether these correlations were statistically significant.

In reviewing this study, although the findings suggest a relation between attachment and IH, the following limitations of this study may limit its validity and generalizability to this study: (a) the sample was predominantly White, educated, and female, (b) the RSQ does not assess attachment based upon the current conceptualization of attachment existing along the two orthogonal dimensions of attachment anxiety and attachment avoidance, (c) the IHS has limited psychometric validity with gay men (Ross and Rosser [1996] found low internal consistency in their initial psychometric validation studies in which three of the four subscales had alpha coefficients of less than .70) and has not been established as a valid measure with lesbians, (d) data analysis was not conducted independently by gender, (e) the author failed to account for age, which may have confounded the results, and (f) the data were not analyzed to determine statistical significance of the relations. And although it is important to take these limitations into consideration, it is important to note that the major finding from this study, that secure

attachment is significantly related to lower levels of IH in sexual minority individuals, is consistent with the findings from Jellison and McConnell (2003).

Implications. Only two studies have empirically examined the relation between attachment and IH with samples that have at least partially included sexual minority men. In general, the findings from these two studies are consistent, in that they suggest that low attachment anxiety and/or low attachment avoidance is related to less IH. However, it is necessary to view this general finding in light of the major limitations of these studies: (a) the employment of various measures of attachment which do not directly assess the current conceptualization of attachment as existing along the two orthogonal dimension of attachment anxiety and attachment avoidance, (b) the employment of measures to assess IH in both men and women (although only validated for one gender) which are not predominantly used by current IH researchers, (c) the disproportionate sampling of White individuals, (d) data analyses which do not explicitly examine the relation between attachment and IH in sexual minority men exclusively, and (e) failing to account for age as a potentially confounding variable.

Therefore, given the limited number of empirical studies that have examined the relation between attachment and IH in sexual minority men and their limitations, this study attempted to strengthen this area of research by accounting for these limitations in the following ways: (a) using the ECR to assess attachment dimensionally, (b) using the IHNI to assess IH in sexual minority men only (c) engaging in an effort to recruit a more racially diverse sample, (d) analyzing data in a manner in which the relation between attachment and IH in sexual minority men can be clearly reported, and (f) accounting for age by exclusively sampling college-aged participants.

Attachment and perceived social support. In their review of several studies, Collins and Feeney (2004) suggested that the body of empirical research examining the relation between attachment and PSS provides evidence that low attachment anxiety and low attachment avoidance is related to greater PSS (Anders & Tucker, 2000; Bartels & Frazier, 1994; Blain, Thompson & Whiffen, 1993; Bartholomew, Cobb, & Poole, 1997; Davis, Morris, & Kraus, 1998; Florian, Mikunlincer & Bucholtz, 1995; Kobak & Sceery, 1988; Ognibene & Collins, 1998; Priel & Shamai, 1995; Rholes, Simpson, Campbell, & Grich, 2001). This review of the empirical relation between attachment and PSS specifically examines three of these studies, as well as two studies that were published by Collins and Feeney following their review of this area of research.

In 1995, Florian, Mikunlincer, and Bucholtz examined the relation between attachment and perceived social support among a sample of 150 Israeli undergraduate students (57% women; 85% single) ranging in age from 21 to 28 years. Of relevance to this study, the authors asked participants to complete two measures of attachment, as previously used by Mikulincer, Florian, and Tolrnacz (1990). The first measure required participants to read a description of the three attachment styles as offered by Hazan and Shaver (i.e., secure, avoidant, ambivalent; 1987) and then report which of the styles each participant felt he/she most fit with. The second measure endorsed a similar procedure to the first measure, but instead of the participants being provided with a description of the three attachment styles, as just mentioned, participants were instead provided with 15 statements that Mikulincer et al. believed corresponded to the three attachment styles (five statements per style). Collectively, from the two measures, Cronbach alphas for the three attachment types ranged from .75 to .84. Of the 150 participants, only five individuals

reported inconsistent attachment styles when comparing the two measures; the data from these individuals were removed prior to data analysis.

Participants also completed the Perceived Available Instrumental and Emotional Support Scale (PAIESS), a 14-item measure which assess the degree of perceived support received from five figures (i.e., mother, father, same-sex friend, opposite-sex friend, romantic partner) delineated by instrumental support (7-items; e.g., "My father is ready to assist me financially when I need it") and emotional support (7-items; e.g., "My father is ready to listen to my innermost feelings without criticism"). The participants also reported the degree of support felt from each of the five figures on a 6-point Likert-type scale from 1 (not at all) to 6 (very much). No information regarding the authorship of the PAIESS was offered, although the investigators of this study stated that the development of the PAIESS was based upon the Social Support Questionnaire (Sarason, Levine, Basham, & Sarason, 1983), the Social Support Perception Scale (Vaux, 1985), and the Social Support Behavior Scale (Vaux, Riedel, & Stewart, 1987). Cronbach alphas for the PAIESS ranged from .83 to .89 for instrumental support, and .79 to .92 for emotional support.

Based upon the attachment measures, 59% of the participants were classified as secure, 30% avoidant, and 11% ambivalent. In conducting a 3-way ANOVA of perceived social support, the authors found a significant main effect for attachment style, $F(2, 142) = 9.27$, $p < .01$. Furthermore, Duncan post-hoc tests ($p < .05$) revealed that individuals with secure attachment ($M = 5.01$) perceived more available social support overall compared to avoidant ($M = 4.57$) and ambivalent ($M = 4.40$) attached individuals, although no significant effect was found between avoidant and ambivalent types. Furthermore, the authors found a significant main effect for support figures, $F(4, 559) = 13.82$, $p < .01$, as individuals perceived the greatest support from

their romantic partners (*M* = 5.08), followed by their mothers (*M* = 4.88), same-sex friends (*M* = 4.87), opposite-sex friends (*M* = 4.66), and with the least amount of perceived support report being from their respective fathers (*M* = 4.56). In sum, this study provides evidence to suggest that more securely attached individuals experience greater PSS. However, it is important to view this finding in light of the limitations of this study in which antiquated measures of attachment were used, and a measure of PSS was used that did not explicitly delineate PSS by familial and non-familial members (thereby potentially conflating the results of the 3-way ANOVA and Duncan post-hoc tests). Additionally, the generalizability of these findings to this study may be limited given the sampling of Israeli participants.

In 1998, Ognibene and Collins examined the interrelations between attachment, coping style, and PSS in order to examine whether coping style mediated the relation between attachment and PSS. The authors sampled 81 undergraduate students (51% female) enrolled in an introductory-level psychology course. No other demographic information was provided. Of relevance to this study, the authors asked participants to respond to two measures of attachment: Bartholomew's four attachment prototypes (Bartholomew, 1990; Bartholomew & Horowitz, 1991), and Bartholomew's Relationship Scales Questionnaire (Griffin & Bartholomew, 1994), both of which are based upon the four attachment prototypes (i.e., secure, preoccupied, dismissing-avoidance, fearful-avoidance) and were standardized and combined to create one score of attachment. The participants were also asked to complete the Perceived Social Support scale (Procidano & Heller, 1983) which assessed both familial and friend dimensions, as previously discussed.

The major finding of this study was that the coping strategy of support-seeking behavior partially mediated the relation between secure attachment and one's perception that he/she had

available support from family and friends. Of particular relevance to this study, the authors found statistically significant relations between the secure attachment prototype and PSS-Friends (r = .46, $p < .001$) and PSS-Family (r = .24, $p < .05$), which suggests that more securely attached individuals experience greater PSS as compared to the other attachment prototypes. This finding is particularly relevant, given that this study assessed PSS with the same measure that is implemented in this study (which delineates PSS into familial and non-familial supports), and which has emerged as the predominant measure in the field. Additionally, the findings from this study appear to be generalizable to the study being proposed, given that the results are based upon a sample of college-aged American participants. However, it is important to view this finding in light of the major limitation of this study, the employment of antiquated measures of attachment.

In 2000, Anders and Tucker examined the interrelations between attachment, interpersonal communication competence (ICC), and PSS in order to examine whether ICC served to partially mediate the relation between attachment and PSS. The authors sampled 104 undergraduate students (53% female; 79% White) who ranged in age from 18 to 23 years (M = 18.84; SD = .90). Of relevance to this study, the authors asked participants to complete measures of attachment (ECR; Brennan, Clark & Shaver, 1998) and perceived social support (Social Support Questionnaire-short version [SSQ6]; Sarason, Sarason, Shearin, & Pierce, 1987). The SSQ6 requires respondents to list up to nine support providers who provide support in six different domains and then asks respondents to rate the degree of satisfaction with the support received from each support provider on a 6-point Likert-type scale from 1 (*very unsatisfied*) to 6 (*very satisfied*). The SSQ6 was found to have high internal consistency (Cronbach alphas = .90 to .93).

The major finding of this study was the ICC was found to partially mediate the relation between attachment and PSS. Of particular relevance to this study, the authors found statistically significant relations between attachment anxiety and amount of social support (r = -.19, p < .05), and satisfaction with social support (r = -.28, p < .01), and between attachment avoidance and amount of social support (r = -.26, p < .05), and satisfaction with social support (r = -.23, p < .05). These results suggest that individuals experiencing greater attachment anxiety and attachment avoidance perceived having fewer social supports with whom they were less satisfied. Put another way, individuals who were more securely attached perceived having more supports with whom they were more satisfied, offering further evidence of the relation between attachment and PSS. Similar to the previous study, this study has relevance given that it employed the ECR to measure attachment (which is used in this study), although a different measure of PSS was used.

Additionally, these findings are likely to generalize to this study, given that both studies sampled college-aged participants. However, one of the limitations of this study is that the SSQ6 does not assess the familial and non-familial dimensions of PSS individually. Given that empirical research has documented that sexual minority individuals have social support networks that are mainly comprised of non-familial members with whom they perceive to be more supportive, as previously discussed in this chapter, these findings could have been more informative for this study if they had been delineated by familial and non-familial supports.

In response to the large pool of correlational studies examining the relation between attachment and PSS, Collins and Feeney (2004) conducted one experimental and one observational study to examine whether attachment styles predispose perceptions of social support. In their first study the authors sampled 90 couples (89 heterosexual) in which one

partner was enrolled in an introductory-level college course in psychology. The partner enrolled in the course was assigned the "caregiver" role, while their partner was assigned the "support recipient" role. The mean age of the caregivers and support recipients was 20.2 years, and 19.4 years, respectively. The experimental procedure included a five-minute window in which partners were left alone together immediately after the support recipient was informed that he/she needed to prepare for a videotaped speech that would be shown to students, and that would also be watched live by his/her caregiver in a separate room. After five-minutes, caregivers were instructed to leave the room, and were subsequently randomly assigned to either the high-support or low-support condition. Caregivers in both conditions were asked to copy support notes in their own handwriting to be delivered to their respective support recipient partner both before and after the speech. Those in the high-support condition were asked to copy highly-supportive notes (e.g., "Don't worry – just say how you feel and what you think and you'll do great!" and "I liked your speech. That was a hard thing to do and you did a really good job") while those in the low-support condition were asked to copy less supportive statements (e.g., "Try not to say anything too embarrassing – especially since so many people will be watching your tape" and "Your speech was a little hard to follow, but I guess you did the best you could under the circumstances").

Prior to the experimental procedure, support recipients were asked to complete the Adult Attachment Scale (Collins & Read, 1990), and were also given Bartholomew's (Bartholomew & Horowitz, 1991) four attachment prototypes in which they were asked to rate the degree of correspondence they believed they had to each of the four types. For the purpose of data analysis the scores from both attachment measures were combined and standardized to form two

dimensions of attachment: anxiety and avoidance. The support recipients were also asked to complete a relationship satisfaction questionnaire and a pre-speech stress measure.

Following the speech, support recipients were asked to evaluate the degree of support they felt they received during the five-minute interaction prior to the speech, as well as from the pre-speech and post-speech notes. After controlling for relationship quality and pre-speech stress, the authors found little variation in the high-support condition, as both securely and insecurely attached individuals rated the five-minute interaction as well as the pre- and post-messages as equally supportive. However, individuals in the low-support condition who were more securely attached appraised their five-minute interactions as more supportive as compared to less securely attached individuals. Using a hierarchical regression strategy and squared semi-partial correlations, Collins and Feeney (2004) used effect size estimates to investigate their hypotheses.

The results from this first study suggest two findings: (a) that when placed into a high support condition, as manipulated through a laboratory setting, individuals report high PSS, regardless of attachment style, but that (b) when placed into a low support condition, as manipulated through a laboratory setting, more securely attached individuals report greater PSS. Although the second finding is consistent with previous studies in this section, the first is not. It is possible that a relation between attachment and PSS was not found in the high support condition as a result of some of the participants not being accustomed to receiving highly supportive notes from their partners, and in response, perceived these notes to be relatively more supportive. In attempting to examine this theory empirically, the authors conducted a second study.

In their second study, Collins and Feeney (2004) conducted an observational study similar to their first experimental study, but instead of randomly assigning caregivers from 153 couples into support conditions, the caregivers were instructed to write genuine pre- and post-speech support messages to their respective support recipients. Also, opposite to the first study, the partner enrolled in the psychology course was typically given the support recipient role, while their partner was assigned the caregiver role. This second study included two phases. In phase one, support recipients were asked to complete a measure of attachment (Experiences in Close Relationship Scale [ECR]; Brennan, Clark, & Shaver, 1998), relationship satisfaction, and relationship-specific perceived support. Procedurally, during phase two, which occurred one week later, the study proceeded as described in the prior study. However, in order to control for the distinction between the support recipient's perceptions of the support note, and the actual support provided in the note, three independent raters assessed the support of the notes prior to data analysis.

After controlling for relationship quality, pre-speech stress, and the independent ratings, the authors found that participants with high attachment anxiety were more likely than participants with low attachment anxiety to report their partner's note as upsetting (β = .30, p = .01), and intending to make them feel bad (β = .30, p = .001). Similarly, participants with high attachment avoidance were also more likely than participants with low attachment avoidance to report their partner's note as upsetting (β = .17, p = .05), and intending to make them feel bad (β = .26, p = .01).

Collectively, Collins and Feeney (2004) suggest that the findings from their experimental and observational studies provide evidence that when presented with "ambiguous or potentially negative events" (p.380), more securely attached individuals perceive these events more

positively, and the individuals involved as more supportive. The authors further contend that although their findings are compelling, a causal link should not be drawn between attachment and PSS, as attachment style could not be randomly assigned in either study. Nonetheless, the findings offered from these two studies are highly relevant to this study given that they are based upon experimental and observational designs, which are lacking throughout much of research examining the relation between any of the constructs involved in this study. Additionally, the findings from these studies are highly generalizable to this study given that both of these studies and this study sampled college-aged participants. In terms of the study's limitations, it is important to note that in their first study the authors employed an antiquated measure of attachment. The authors corrected for this in their second study by employing the ECR, which is based upon the current conceptualization of attachment as existing along the two orthogonal dimensions of attachment anxiety and attachment avoidance. In taking both the strengths and limitations of the two studies offered by Collins and Feeney into consideration, the findings from their studies offer strong evidence to suggest that secure attachment is related to greater PSS, even when negative/ambiguous social support stimuli is present, which is not true for individuals with insecure attachment.

Implications. As suggested by Collins and Feeney (2004) in their review (which included the three aforementioned studies), as well as from the two studies they conducted themselves, this body of scientific literature which has examined the relation between attachment and PSS provides an overwhelming amount of empirical evidence to suggest that low attachment anxiety and low attachment avoidance is related to greater PSS. Moreover, the findings from several of these studies appear to be generalizable to this study given that they are based upon a sample of college-aged participants which were also recruited for this study. However, it is necessary to

view this general finding in light of the major limitations of these studies: (a) samples which are almost exclusively heterosexual [although preliminary research suggests, as previously discussed, that attachment appears to function and be experienced similarly between heterosexual and sexual minority adults], (b) samples in which the demographic information is not provided, or is largely White, (c) the employment of various measures of attachment which do not directly assess the current conceptualization of attachment as existing along the two orthogonal dimension of attachment anxiety and attachment avoidance, and (d) the employment of measures which fail to assess the PSS of familial and non-familial supports independently.

In order to account for the limitations of these previous studies, this study enacted the following measures: (a) exclusively sample sexual minority men, (b) attempt to recruit a more racially diverse sample, (c) employ the ECR to assess attachment dimensionally, and (d) employ the PSSS to assess the PSS of familial and non-familial supports independently. Thus far, this section on the empirical relations between the constructs of this study has exclusively focused on the construct of attachment as influencing the experience of IH and PSS. However, a third and final relation, that of PSS and IH must also be discussed in order to build an empirical basis for this study.

Perceived social support and internalized heterosexism. Several studies have examined the empirical relation between PSS and IH in sexual minority men. Collectively, these studies provide evidence to suggest that greater PSS is associated with less IH. And although this study examined this relation in sexual minority men, it is important to note that two studies which have examined this relation in lesbian women have also found greater PSS to be related with less IH (McGregor et al., 2001; Szymanski, Chung, & Balsam, 2001). In examining this

relation in sexual minority men, four studies are offered in this section, with only relevant findings to this study being presented.

In 1990 Nicholson and Long examined the relation between social support, internalized homophobia, self-esteem, and coping strategies among a sample of 89 Canadian men (89% gay; 11% bisexual; 72% HIV-positive; 28% AIDS-Related Complex; 97% White; 65% having at least some college experience) ranging in age from 23 to 62 years (M = 35.7; SD = 7.3). Of relevance to this study the authors employed the Nungesser Homosexual Attitudes Inventory (NHAI; Nungesser, 1983) to measure IH and the Revised Kaplan Scale (Turner, Frankel, & Levin, 1983) to measure PSS. The authors stated that the scales offered good internal consistency with Cronbach alphas ranging from .89 to .95. In analyzing the data, the authors were primarily interested in two regression equations to predict avoidant coping and mood state. Therefore, although the authors provided correlational data between the constructs of PSS and IH (r = -.45; no p value offered), no analysis concerning the statistical significance of this relation was conducted. Additionally, this correlation is based upon data analysis from the full sample, which included both gay and bisexual men.

In 1994 Shidlo examined the relation between PSS and IH among other variables for the purpose of examining the psychometric qualities (i.e., construct and content validity, social desirability bias) of the NHAI (Nungesser, 1983). As a result, Shidlo developed a revised version of this scale (NHAI-Revised). The sample included 54 men (from 125 potential participants who were sent questionnaire packets) who were members of a gay community group (82% White; 60% college-graduates) ranging in age from 17 to 64 years (M = 32). The participants completed the NHAI and the Social Support Questionnaire (SSQ; Sarason, Levine, Basham, & Sarason, 1983) which included an index of number of supports (Cronbach alpha = .97), and an index of

support satisfaction (Cronbach alpha = .94). The author found statistically significant relations between IH and overall social support (r = -.41, p < .01), and between IH and satisfaction with social supports (r = -.33, p < .05). This provides evidence to suggest that greater PSS is related with less IH, although findings were not delineated by familial and non-familial supports due to the nature of the PSS measure.

In 1996 Otis and Skinner sampled 1067 lesbian (46.9%) and gay (53.1%) individuals (93.3% White, 80.2% living in an urban or suburban area, mean age of 34.4 years) in order to examine the relation between multiple forms of victimization and psychological outcomes (e.g., social support, depression, self-esteem, external stress, internalized homophobia). And although the purpose of this study was not to examine the relation between PSS and IH in gay men, the authors conducted an analysis of statistical significant of the correlation coefficients all of the measured variables. Of relevance to this study the authors used the Social Support Questionnaire (SSQ; Sarason, Levine, Basham, & Sarason, 1983) to assess PSS. The SSQ asks respondents to report categorically whether friends, partners, or nobody is available to provide support in fourteen different situations. The authors provided no information pertaining to the psychometric validation of the SSQ. Additionally, in order to assess IH, the authors simply asked respondents to rate the degree to which "I feel stress or conflict with myself because of my sexual orientation" on a scale which ranged from *strongly agree* to *strongly disagree*, although the numeric parameters of the scale were not provided.

In referring to the author's correlation coefficient table which reported results as a collective sample of lesbian and gay participants, statistically significant relations between IH and Partner Support (r = -.09, p<.05), Friends Support (r = -.13, p<.05), and No Support (r = .09, p<.05) were offered. These findings suggest that participants with greater PSS of their partners

and friends experience less IH, and that participants who held greater perceptions of no support experienced greater IH. Although these results are suggestive of a relation between greater PSS and less IH in gay men, it is important to view these findings in light of the rudimentary manner in which IH was assessed, and in the collective nature in which the results were reported.

A recent study by Szymanski and Carr (2008) sampled 210 sexual minority males (86% self-identifying as gay, 13% self-identifying as bisexual, and 1% unsure) in order to test two proposed mediation models concerning the constructs of IH, gender role conflict, social support, self-esteem, avoidant coping, and psychological distress. Of relevance to this study, the investigators employed two measures of IH (INHI, Mayfield, 2001; IHP short form, Herek, Cogan, & Gillis, 2000). Additionally, PSS was measured by the Social Support Questionnaire short form (SSQ6; Sarason, Sarason, Shearin, & Pierce, 1987) which consists of 12-items (two subscales of six-questions each) assessing number of social supports and satisfaction with social supports. The authors reported alpha coefficients ranging from .90 to .93 for the SSQ6 and offered validity evidence by a strong correlation between the short and original forms (27 items). The authors found a statistically significant relation between number of social supports and IH (IHNI: $r = -.30$, $p < .01$; IHP short form: $r = -.24$, $p < .01$) and between social support satisfaction and IH (IHNI: $r = -.31$, $p < .01$; IHP short form: $r = -.23$, $p < .01$). These results provide evidence to suggest that greater PSS is related with less IH in gay men, although it is important to note that results were based upon the collective sample which included both gay and bisexual men, and did not assess PSS by familial and non-familial dimensions.

Implications. In reviewing the aforementioned studies in this section, all of the findings consistently provide evidence to suggest that greater PSS is related with less IH in sexual minority men. However, it is necessary to view this general finding in light of the major

limitations of these studies: (a) samples which provide limited demographic information, and which are largely White, (b) the employment of a non-psychometrically validated measure of IH in one particular study, (c) the employment of antiquated measures of PSS which fail to assess familial and non-familial supports independently, (d) data analyses which fail to report the results of sexual minority men independent from participants with other sexual orientations, and (e) the failure to either report or account for the potentially confounding variable of age. In order to account for the limitations of these previous studies, this study used the following procedures: (a) made efforts to recruit a more racially diverse sample, (b) employed the IHNI to assess IH, (c) employed the PSSS to assess the PSS of familial and non-familial supports independently, (d) reported the results of sexual minority men, and (e) exclusively recruited a college-aged sample.

Section summary. The goal of this section was to provide an empirical basis that the constructs of attachment and PSS may influence the degree to which sexual minority men develop IH. In general, the three subsections which have examined the empirical relations between attachment and IH, attachment and PSS, and PSS and IH have offered consistent findings which document that significant relations exist among these constructs. Specifically, this section provided empirical research evidence which documented that (a) low attachment anxiety, low attachment avoidance, and greater PSS is related with less IH, and (b) that low attachment anxiety and low attachment avoidance is related with greater PSS.

And although statistically significant empirical relations have been found among these variables, only a limited number of studies have been conducted thus far. Additionally, it is important to view the findings of the studies described in this section in light of their conceptual, methodological, and data analysis limitations. Efforts were made to account for these limitations in this study.

Summary

As a result of the heterosexist society in which we live, sexual minority men receive messages based upon their sexual orientation, that they are "less than." In turn, sexual minority men develop feelings of shame and self-hatred, known as internalized heterosexism (i.e., IH). All sexual minority men experience IH to some degree, although it is not well understood why some sexual minority men experience greater IH than others. The scientific body of literature which has examined IH in sexual minority men provides overwhelming evidence to suggest that sexual minority men who experience greater IH also experience poorer health and more maladaptive interpersonal functioning. However, only limited empirical research has focused on the factors which influence the degree to which sexual minority men experience IH. Therefore, the purpose of this study was to examine potential factors (e.g., attachment, PSS) that may influence the development of IH in sexual minority men.

Conceptually, the constructs of attachment, PSS, and IH all share a similar premise in that they are all based upon developed expectations, specifically, of whether others will be available to meet ones' needs (i.e., attachment, PSS), and whether others will devalue you, based upon your sexual orientation (i.e., IH). Therefore, conceptually, it makes sense that a relation exist between these three constructs. Furthermore, the scientific bodies of literature which has examined the constructs of attachment and PSS provide empirical evidence to suggest that low attachment anxiety, low attachment avoidance, and greater PSS is associated with greater health and more adaptive interpersonal functioning. Therefore, conceptually, it is conceivable that attachment and PSS may influence the degree to which sexual minority men develop IH.

In reviewing the empirical literature which has examined the relations between these constructs (e.g., attachment and IH, attachment and PSS, PSS and IH), consistent findings

emerged: (a) low attachment anxiety, low attachment avoidance and greater PSS is related with less IH, and (b) low attachment anxiety and low attachment avoidance is related with greater PSS. However, these findings, although consistent within the bodies of literature which have examined these relations, should be viewed in light of their conceptual, methodological, and data analyses limitations which were accounted for in this study. The empirical findings in this review suggest that low attachment anxiety, low attachment avoidance and greater PSS may serve to mitigate the degree to which sexual minority men develop IH. In sum, this literature review has provided both a conceptual and empirical basis to suggest that attachment (i.e., secure attachment) and PSS (i.e., greater PSS) may serve to mitigate the degree to which sexual minority men develop IH (i.e., less IH).

Hypotheses

The empirical studies described in this literature review provided consistent evidence that low attachment anxiety, low attachment avoidance and greater PSS are related to lower levels of IH, and also that low attachment anxiety and low attachment avoidance is related to greater PSS. However, these findings are based upon a limited number of studies with significant limitations. Only two studies have examined the relation between attachment and IH (the primary relation being examined in this study). A first study conducted by Jellison and McConnell (2003) provided results on the relation between attachment security and IH, but did not delineate the results between attachment anxiety and attachment avoidance, although a significant relation was found in general. A second study conducted by Sherry (2007) did offer findings based upon the delineation of attachment dimensions, and provided evidence of a positive relation between attachment anxiety and IH, although tests of statistical significance were not conducted. In pulling from these two studies to guide the hypotheses of this study, it is not clear whether

attachment anxiety or attachment avoidance will be more strongly related with IH, although a positive relation is expected in both. Therefore, the first hypothesis of this study is that attachment anxiety will be positively related with IH. The second hypothesis is that attachment avoidance will be positively related with IH.

Additionally, the studies examined in this literature review document that a relation exists between PSS and attachment, and PSS and IH. As a result, this study is hypothesizing that PSS is a mediating variable that may explain the relation between attachment and IH. However, as already mentioned earlier in this literature review, a primary limitation of the studies that examined the relation between PSS and attachment and PSS and IH is that PSS has rarely been delineated into family and friend supports to be investigated orthogonally. This is an important limitation in which to take note, given that the family and friend support networks of sexual minority men are phenomenologically distinct (see *Familial and Non-familial Perceived Social Support* section of this chapter for a review). Given this limitation of previous studies, it is not clear whether family PSS or friend PSS will mediate a larger proportion of the relation between attachment and PSS, although both forms of PSS are hypothesized to mediate this relation. With this being stated, the third hypothesis of this study is that family PSS will mediate the relation between attachment anxiety and IH. The fourth hypothesis of this study is that friend PSS will mediate the relation between attachment anxiety and IH. The fifth hypothesis of this study is that family PSS will mediate the relation between attachment avoidance and IH. The sixth and final hypothesis of this study is that friend PSS will mediate the relation between attachment avoidance and IH.

All six of these hypotheses were tested within the framework of minority stress theory (Meyer, 1995, 2003; see chapter one for review). Specifically, this study investigated whether

the degree to which sexual minority men internalized distal stressors (e.g., negative messages) associated with their sexual minority status (as evidenced through the proximal stressor of IH) was influenced by attachment, and further, mediated by PSS.

These hypotheses, as just described, were tested based upon sequential regression analyses, as described by Baron and Kenny (1986). Diagrams of the four mediation models (see Figures 1, 2, 3 & 4) of this study are presented in the next section, following a summary of the six hypotheses, as just described.

Summary of hypotheses.

1. There will be a positive relation between attachment anxiety and internalized heterosexism.
2. There will be a positive relation between attachment avoidance and internalized heterosexism.
3. Family perceived social support will mediate the relation between attachment anxiety and internalized heterosexism.
4. Friend perceived social support will mediate the relation between attachment anxiety and internalized heterosexism.
5. Family perceived social support will mediate the relation between attachment avoidance and internalized heterosexism.
6. Friend perceived social support will mediate the relation between attachment avoidance and internalized heterosexism.

Models

Figure 1

First mediation model: Family perceived social support as a mediator of the relation between attachment anxiety and internalized heterosexism

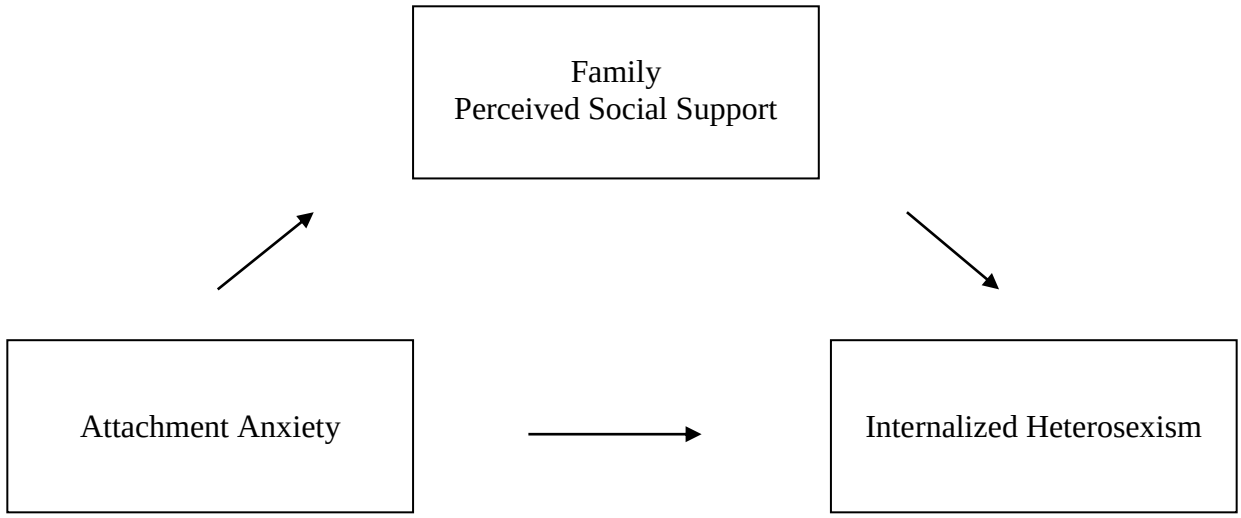


Figure 2

Second mediation model: Friend perceived social support as a mediator of the relation between attachment anxiety and internalized heterosexism

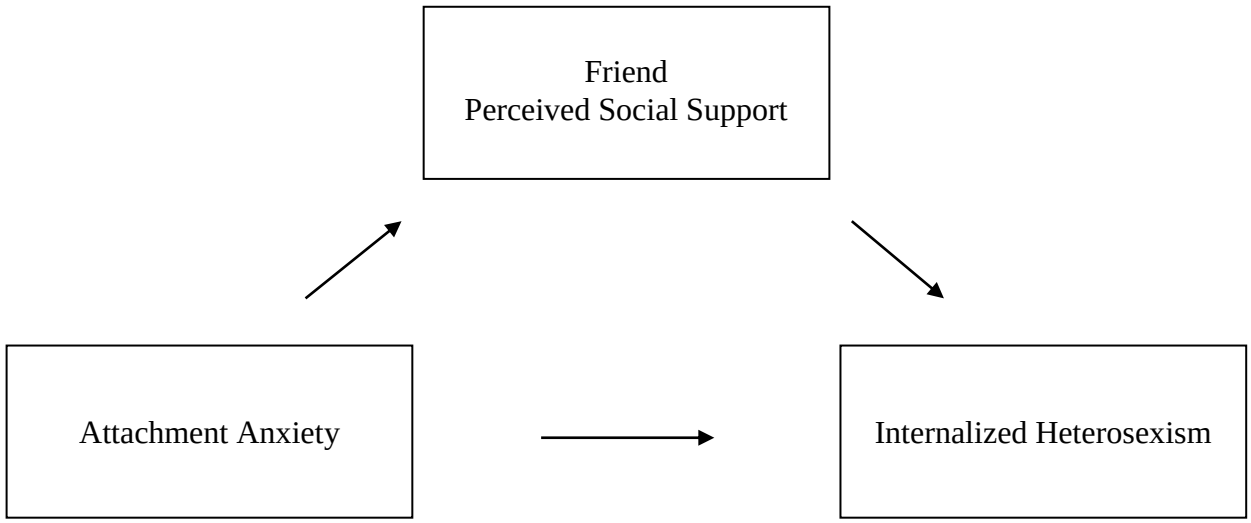


Figure 3

Third mediation model: Family perceived social support as a mediator of the relation between attachment avoidance and internalized heterosexism

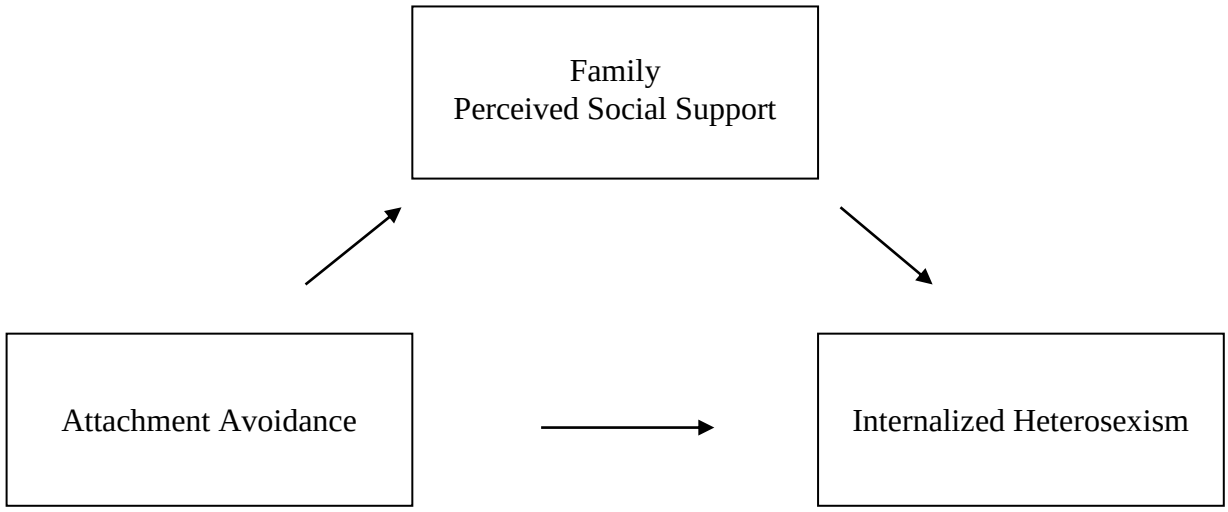
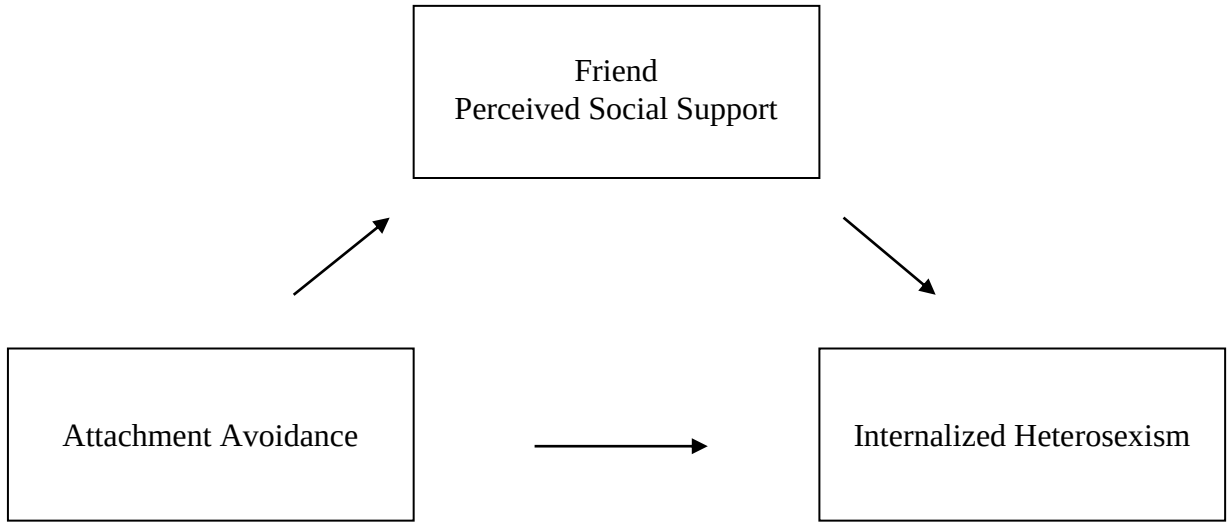


Figure 4

Fourth mediation model: Friend perceived social support as a mediator of the relation between attachment avoidance and internalized heterosexism



Chapter 3

Method

Chapter two provided evidence to suggest that sexual minority men who experience greater internalized heterosexism (IH) also experience poorer health and more maladaptive interpersonal functioning as compared to sexual minority men who experience less IH. However, limited empirical attention has focused on the factors which may serve to influence the degree of IH that is experienced by sexual minority men. In response, the previous chapter offered both conceptual and empirical bases to suggest that attachment and perceived social support (PSS) may be two such factors. In establishing these bases, the previous chapter offered findings in light of the major limitations of the studies which have previously examined the relations between attachment, PSS, and IH. As laid out in the previous chapter, these limitations were taken into account in designing and conducting this study. This chapter serves to describe the method that was used to investigate how attachment and PSS influences the degree to which sexual minority men experience IH. Specifically, this chapter describes the sample, the measures that were used, and the recruitment and data collection procedures.

Participants

An a priori power analysis was conducted using G*Power (Version 3.1.2; Faul, Erdfelder, Lang & Buchner, 2007) to determine a minimum required total sample size of 124 participants for an effect size of .125. This analysis was based upon a Cronbach alpha of .05, a desired power of .95, and with the number of predictor variables set at two (i.e., predictor variable and mediator variable).

Prior to cleaning the data for inclusion criteria, 208 cases were obtained through recruitment. First, data were examined for the inclusion criteria of age between 18 and 25 years, and 20 cases were removed. Second, data were examined for the inclusion criteria of currently

being enrolled in an institution of higher education, and 17 cases were removed. Third, data were examined for the inclusion criteria of reporting a male gender identity, and 12 cases were removed (10 reported female and 2 reported transgender). Seven cases indicated a gender identity as "other," but were included in the sample given that all (a) specified they did not believe in the categoricalization of gender identity as the rationale for not endorsing one of the listed gender identities, (b) reported biological sex as male, and (c) reported a sexual orientation toward males. Fourth, data were examined for the inclusion criteria of reporting a birth sex of male, and 7 cases were removed (5 reported female, 1 reported intersex, and 1 reported other but did not specify).

Fifth, data were examined for the inclusion criteria of having a sexual orientation toward males based upon three methods of assessment as outlined by the Williams Institute (2009): (a) self-identification of sexual orientation, (b) sexual behavior within the past year, and (c) sexual attraction. None of the remaining cases failed to meet this inclusion criterion. Specifically, with regard to self-identification of sexual orientation, all remaining cases (n = 124) reported one of the following: "gay (n = 110)," "bisexual (n = 3)," "same gender loving (n = 2)," and "other (n = 9)." Individuals that self-identified as "other" were included given that all indicated that that within the past year they had sex with other men or had not had sex at all, and were sexually attracted to either "only men" or "mostly men." None self-identified as "heterosexual." With regard to sexual behavior within the past year, the majority (n = 100) reported sexual behavior with "men only." The remaining participants reported either having had sex with "both men and women (n = 2)," "women only (n = 3)," or "had not had sex (n = 19)." The three cases that reported having had sex with "women only" were not excluded given that all self-identified as either "gay" or "bisexual," and reported being sexual attracted to either "only men" or "mostly

men." With regard to sexual attraction, the majority reported either being sexually attracted to "only males (*n* = 74)," "mostly males (*n* = 47)," or "equally males and females (*n* = 2)." One case reported "other," and no cases reported being attracted to "mostly females," or "only females."

Although the term "sexual minority" was used throughout this manuscript as an inclusive term to represent all men with a non-heterosexual orientation in a fluid manner, the current sample is best described as "gay and bisexual men" given that the majority of participants self-identified as gay, have had sex with men only, and reported being sexually attracted to both men and women (see Table 1 for a summary).

Table 1

Frequency of Sexual Orientation Dimensions in Sample

Dimension	*N*	*%*
Self-Identification		
Gay	110	88.7
Bisexual	3	2.4
Same Gender Loving	2	1.6
Other	9	7.3
Sexual Behavior		
Men Only	100	80.6
Both Men & Women	2	1.6
Women Only	3	2.4
Had Not Had Sex	19	15.3
Sexual Attraction		
Only Males	74	59.7
Mostly Males	47	37.9
Equally Males & Females	2	1.6
Other	1	0.8

After cleaning the data for the aforementioned inclusion criteria, a total of 56 cases were removed, resulting in 152 remaining cases. However, an additional 28 cases were removed after

being cleaned for missing data (see chapter 4 for missing data procedures), resulting in the final sample size of this study: 124 sexual minority men enrolled in an institution of higher education. Specifically, the sample ranged in age from 18 to 25 years (M = 20.86, SD = 1.79) with 8.1% reporting as Hispanic/Latino. With regard to race, participants identified as: Caucasian/White (83.9%), Asian American (3.2%), Caribbean/West Indian (3.2%), African American/Black (2.4%), Asian (1.6%), Biracial (1.6%), and other (3.2%).

With regard to sexual orientation outness, participants completed the Outness Inventory (Mohr & Fassinger, 2000; see measures section below for more detail) to assess sexual orientation outness. Participants were asked to report their degree of outness with individuals/groups on a 7-point Likert-type scale (1 = *person definitely does not know about your sexual orientation status;* 7 = *person definitely knows about your sexual orientation status, and it is openly talked about*), with higher scores indicating greater outness. The full scale included 10 items, and assessed for the degree to which individuals were "Out to World" (e.g., new straight friends, work peers, work supervisors, strangers), "Out to Family" (e.g., mother, father, siblings, extended family/relatives), and "Out to Religion" (e.g., members of my religious community, leaders of my religious community). The Overall Outness (M = 3.6, SD = 1.24) for each case was tabulated by summing all items and calculating the average. Two of the 124 cases were removed before calculating the Overall Outness score for this sample, given that these cases had more than 10% of the data missing. However, these two cases were included in the final sample, given that scores from this outness measure were not relevant to the mediation analyses.

Additionally, 104 (83.9%) participants reported that their university's non-discrimination statement included sexual orientation, while the remaining 20 participants (16.1%) reported they

were “not sure.” With regard to geographic region, seven participants reported spending the majority of their childhood outside the Unites States, whereas most participants reported spending the majority of their childhood within the New England, Mid-Atlantic, and Great Lakes regions within the United States. Participants also reported the following regarding the population of the environment in which they grew up: suburban (39.5%), urban/city (17.7%), small town (16.9%), rural, non-farm (12.1%), farm/ranch (6.5%), multiple environments (4.8%), and other (2.4%).

All 124 participants reported having at least one parent/guardian, with 122 reporting two parents/guardians. The following education levels were reported for parents/guardians: less than a college education (no high school, some high school, high school diploma/GED, some college, business/technical certificate/degree, Associate’s degree; 47.6% for first parent/guardian, 47.5% for second parent/guardian), Bachelor’s degree (20.2% for first parent/guardian, 22.1% for second parent/guardian), and post-graduate education (some graduate work, Master’s degree, Doctoral degree, other professional degree; 32.3% for first parent/guardian, 28.7% for second parent/guardian).

Measures

Demographic Questionnaire (Appendix D). The demographic questionnaire used in this study collected the following information: age, college enrollment, birth sex, gender identity, sexual orientation (i.e., self-identified, sexual behavior during past year, sexual attraction), whether their university’s non-discrimination policy included sexual orientation, ethnicity, race, geographic region in which one was raised, population of area in which one was raised (e.g., rural, suburban, urban/city), and parent/guardian education levels.

Outness Inventory (Appendix E). Mohr and Fassinger (2000) developed the Outness Inventory (OI) to measure sexual orientation outness among sexual minority men and women. It was selected as an instrument in this study in order to provide a more thorough description of the sample. The OI consists of 3 subscales that include a total of 10 items: Out to World (4 items; "My new straight friends," "My work peers," "My work supervisors," "Strangers"), Out to Family (4 items; "Mother," "Father," "Siblings," "Extended family/relatives"), and Out to Religion (2 items; "Members of my religious community [e.g., church, temple]," "Leaders of my religious community [e.g., minister, rabbi]"). Respondents are asked to rate each item on a 7-point likert-type scale in terms of how out they are with that person/group (1 = *person definitely does not know about your sexual orientation status;* 7 = *person definitely knows about your sexual orientation status, and it is openly talked about*). Respondents are also given the option of rating each item as, "not applicable to your situation; there is no such person or group of people in your life," which receives a raw score of zero. Higher scores indicate greater outness. The full-scale version was used in this study, and was tabulated by summing all items, and then finding the average for each case.

Mohr and Fassinger (2000) found high internal consistency (Cronbach alpha) for all three subscales: Out to World (.79), Out to Family (.74), and Out to Religion (.97), and Balsam and Mohr (2007) found high internal consistency (Cronbach alpha) for the full-scale (.87). The current study also found high internal consistency (Cronbach alpha) for the full-scale (.80). Mohr and Fassinger offered evidence of validity by the statistically significant relations (range of r = .20 to .37, $p < .05$) between the subscales of the OI and a measure of identification with lesbian and gay communities.

Internalized Homonegativity Inventory (Appendix F). No scale has been explicitly developed to measure internalized heterosexism. However, the items on the Internalized Homonegativity Inventory (IHNI; Mayfield, 2001) are consistent with internalized heterosexism, and therefore, have been used by recent internalized heterosexism researchers (Szymanski, Kashubeck-West, & Meyer, 2008b). The IHNI was developed to measure internalized homonegativity in gay men and consists of 23-items, delineated by three subscales: personal homonegativity (11 items; e.g., "I feel ashamed of my homosexuality;" "Sometimes I feel that I might be better off dead than gay"), gay affirmation (7 items; e.g., "I am proud to be gay;" " I am thankful for my sexual orientation"), and morality of homosexuality (5 items; e.g., "I believe it is morally wrong for men to be attracted to each other;" "In general, I believe that gay men are more immoral than straight men"). Respondents are asked to rate each item on a 6-point Likert-type scale (1 = *strongly disagree*, 6 = *strongly agree*), with higher scores indicating higher internalized homonegativity. The raw score for the full scale is obtained by summing the raw scores from the three subscales (i.e., summing the scores from all 23-items) which can range from 23 – 138. Given that Mayfield reported that the three subscales were significantly positively correlated with each other, the subscales may not be distinct. As a result, this study used the full-scale score of all 23-items from the IHNI to represent IH level, which is the same decision that Kashubeck-West and Szymanski (2008) made in a recent study.

Mayfield (2001) found an internal consistency (coefficient alpha) of .91 for the full 23-item scale. The IHNI has been used by several authors in recent years who have also found high internal consistency (Cronbach alpha) for the full-scale (.95, Kashubeck-West & Szymanski, 2008; .91, Shoptaw et al., 2009; .94, Szymanski & Carr, 2008). This study also found high internal consistency (Cronbach alpha) for the full 23-item scale (.88). Mayfield also offered

evidence of validity. First, evidence of convergent validity was documented by the significant positive relation between the IHNI and the Nungesser Homosexuality Attitudes Inventory (Nungesser, 1983; $r = .85$, $p < .001$). Second, evidence of discriminant validity was offered by the significant negative relation between the IHNI and extroversion ($r = -.24$, $p < .001$), and by the significant positive relation between the IHNI and emotional stability ($r = .25$, $p < .001$). Third, evidence for construct validity was offered by the significant negative relation between the IHNI and gay identity stage ($r = -.68$, $p < .001$). Additionally, Mayfield found that scores on the IHNI were not significantly related to social desirability.

Experiences in Close Relationships Scale (Appendix G). The Experiences in Close Relationships Scale (ECR; Brennan, Clark, & Shaver, 1998) was developed based upon previous measures of attachment which assessed attachment categorically (e.g., secure, preoccupied, dismissing-avoidant, fearful-avoidant). The ECR was developed to measure two orthogonal dimensions of attachment: attachment anxiety and attachment avoidance. The attachment avoidant subscale measures one's discomfort with emotional closeness and interdependence in interpersonal relationships, and the attachment anxiety subscale measures one's fear associated with being abandoned or rejected by others. The ECR consists of 36 items (18 per subscale). Items from the attachment anxiety subscale include "I worry about being rejected or abandoned," and "I find that my partners don't want to get as close as I would like." Items from the attachment avoidance subscale include "I am very comfortable being close to other people," and "I prefer not to show others how I feel deep down." Each item is responded to on a 7-point Likert-type scale (1 = *strongly disagree*; 7 = *strongly agree*), with higher scores indicating higher attachment anxiety and attachment avoidance, respectively, after reverse scoring is taken into consideration. Respondents are directed to answer questions based upon how they generally feel

in close relationships with significant others in their lives (e.g., partners, friends, parents). Raw scores for each subscale are computed by taking the average of the 18 items within each subscale, ranging from one to seven.

The authors found high internal consistency (Cronbach alpha) for both the attachment anxiety (.91) and attachment avoidance (.94) subscales, and a low correlation between the subscales (r = .11), indicating that the two subscales are measuring orthogonal factors of attachment. The ECR has been a widely used scale in which many authors have also found high internal consistency (Cronbach alpha) for the subscales of attachment anxiety (.90, Davis, Shaver, & Vernon, 2004; .87, Treboux, Crowell, Waters, 2004; .88, Woodhouse & Gelso, 2008) and attachment avoidance (.85, Davis et al.; .89, Treboux et al.; .90, Woodhouse & Gelso, 2008). The current study also found high internal consistency (Cronbach alpha) for the subscales of attachment anxiety (.91) and attachment avoidance (.93), and a low correlation between the two (r = .2). Brennan, Shaver, and Clark (2000) reported high test-retest reliability (Cronbach alpha of .70) over a three-week interval for both subscales. Evidence of construct validity for the ECR was offered by Brennan et al. (1998) by the relations between the ECR and touch, sexual practices, and postcoital emotions.

Perceived Social Support Scale (Appendix H). The PSS scale (Procidano & Heller, 1983) measures "the extent to which an individual perceives that his/her needs for support, information, and feedback are fulfilled by friends and by family" (p.2). The PSS scale is a 40-item scale which includes a 20-item subscale which measures one's PSS of their friends (PSS-Fr) and a 20-item subscale which measures one's PSS of their family (PSS-Fa). The items on both scales are similar, as the primary difference between the subscales is whether the item refers to an individual's family or friends. Sample items include "my friends (family) give me the moral

support I need," and "my friends (family) are sensitive to my personal needs." Respondents are asked to select from one of three possible choices for each item (e.g., Yes, No, Don't Know). Items which are rated "Yes," receive a raw score of one while items rated "No" and "Don't Know" receive a raw score of zero. After indicated items are reverse scored, raw scores for each subscale are calculated by summing the score from all 20 items in that subscale which ranges from zero to 20. Higher scores indicate higher PSS.

In validating their scale, the authors sampled undergraduate students at a large Midwestern university. The authors found both high test-retest reliability (r = .83 over a 1-month interval), and high internal consistency (Cronbach alphas of .88 for PSS-Fr and .90 for PSS-Fa). The PSS scale has been a widely used measure in which many authors have also found high internal consistency (Cronbach alphas) for both subscales (.77 for PSS-Fr, .87 for PSS-Fa, Kurdek & Schmitt, 1987; .89 for PSS-Fr, .96 for PSS-Fa, Ognibene & Collins, 1998; .85 for PSS-Fr, .89 for PSS-Fa, Sheets & Mohr, 2009). The current study also found high internal consistency (Cronbach alpha) for the subscales of PSS-Fa (.93), and PSS-Fr (.87). Additionally the authors found each subscale to be composed of a single factor by conducting a separate factor analysis with orthogonal factor rotation. Sarason, Sarason, Shearin, and Pierce (1987) found evidence for the validity of the PSS scale by its strong correlation with the three subscales of the Social Support Questionnaire (SSQ; Sarason, Levine, Basham, & Sarason, 1983): (a) Number of Supports (r = .53, p < .001 for PSS-Fr; r = .40, p < .001 for PSS-Fa), (b) Family Support (r = .33, p < .01 for PSS-Fr; r = .52, p < .001 for PSS-Fa), and (c) Satisfaction with Supports (r = .47, p < .001 for PSS-Fr; r = .65, p < .001 for PSS-Fa). Sarason, Shearin, Pierce, and Sarason also offered validity evidence for the PSS scale by its strong correlation with the total score of the

Interpersonal Support Evaluation List (ESEL; Cohen, Mermelstein, Kamarck, & Hoberman, 1985; $r = .70$, $p < .001$ for PSS-Fr, and $r = .59$, $p < .001$ for PSS-Fa).

Procedures

Recruitment. This study was conducted over the internet, through an on-line web-based method. Based upon a collaborative effort between this author and the director of the LGBTA center at the Pennsylvania State University, all LGBT centers that are members of the *Consortium of Higher Education LGBTA Resource Professionals* were invited to participate in the study. The consortium is comprised of LGBTA centers housed within colleges and universities of higher education within the United States. Over the course of four weeks the director of the LGBTA center at the Pennsylvania State University sent three separate emails (each two weeks apart) to all LGBTA center directors, through the national consortium listserv. These emails asked center directors to forward, via email, the recruitment notice (Appendix A) for this study to all students registered within their respective centers. The recruitment notice provided a brief synopsis of the study, asked for voluntary participation, and informed about the confidential nature of participation. The recruitment notice encouraged potential participants to forward the recruitment notice to other males whom they felt may have been less open or out regarding their sexual orientation. The recruitment notice also informed prospective participants of an incentive, that for every 50 participants, one would be randomly selected to receive his choice of either a Rainbow Pride Flag (valued at $40) or a $40 Starbucks gift card.

Additionally, as an attempt to increase participation among sexual minority men who also identify as an ethnic and/or racial minority, the director of the LGBTA center at the Pennsylvania State University sent several personalized emails to her colleagues at institutions where she was aware of a more ethnically and racially diverse LGBTA center. When making these contacts

with her colleagues, she only asked that they forward along the recruitment notice that was emailed to them, and she made all of these contacts within the four week period in which the three recruitment emails were sent.

Data collection. The data were collected using an Internet, on-line web-based survey on PsychData (www.psychdata.com). The recruitment notice provided a direct weblink to this online study. When participants clicked on the link, they were sent to a welcome page that included instructions for how to complete the study, and an informed consent form that stated, in part, that participation was voluntary and could be terminated at any time. To confirm their voluntary participation, participants were asked to click a button at the bottom of the informed consent form. Upon confirming their participation, individuals were automatically directed to complete the demographic questionnaire. Upon its completion, participants were randomly assigned to one of four survey versions that were comprised of the aforementioned measures. The four surveys were identical with the exception of the order of the measures, in order to ensure they were counterbalanced.

In order to ensure security of the data provided by participants, www.psychdata.com was chosen as it uses Secure Server Layer technology which provides encrypted protection. Additionally, in order to ensure that each participant only submits one set of data, the IP address of each participant was included in the data collection procedure. An IP address is a unique identifying number used to identify which computer was used to complete this Internet, web-based survey.

Chapter 4

Results

This chapter provides the results of this study, which examined whether perceived social support (PSS) mediated the relation between attachment and internalized heterosexism (IH). Specifically, four mediated regression models were analyzed through the Baron and Kenny (1986) method: (a) family PSS as a mediator of the relation between attachment anxiety and IH, (b) friend PSS as a mediator of the relation between attachment anxiety and IH, (c) family PSS as a mediator of the relation between attachment avoidance and IH, and (d) friend PSS as a mediator of the relation between attachment avoidance and IH. The results of the preliminary analyses are provided, followed by the findings of this study. Additionally, results from post-hoc analyses are described.

Preliminary Analyses

Data cleaning. After the data were examined and cleaned for inclusion criteria, as described in chapter three of this manuscript, 152 cases remained to be examined and cleaned in this preliminary analysis. First, data were examined to ensure that no individual had participated in the study more than once. Upon checking computer IP addresses across participants, it was determined that all cases were unique, with no individuals participating more than once.

Second, missing data were examined. Initially, 28 cases were deleted in which at least one entire scale or subscale (e.g., attachment anxiety subscale of the ECR, attachment avoidance subscale of the ECR, friend subscale of the PSSS, family subscale of the PSSS, IHNI) had not been completed. Next, the remaining cases were screened to determine the amount of missing data present within each case. Schlomer, Bauman, and Card (2010) reported that “experts have not reached a consensus regarding the percentage of missing data that becomes problematic,”

although they shared that common cut-off points offered by some authors included 5%, 10%, and 20%. The current study used a 10% cut-off point for any given scale or subscale. Of the 125 cases that were examined in this study, 32 had at least one piece of missing data. However, no cases were deleted, as all of the cases that were examined had 10% or less missing data per scale or subscale (i.e., only 1 case had 10% missing data, which was located within the friend PSS subscale; 31 cases had missing data that ranged between 4.3% and 8.6% for any given scale or subscale). In general, a very small amount of missing data was found overall (i.e., 39 missing entries out of a total of 12,375 or 0.003%). Specifically, of the 99 different items housed within the measures of the ECR, PSSS, and IHNI, only six items had two missed responses (i.e., of the 124 participants, 122 had answered that item). All other items that had a missing response was only missed by one individual (i.e., all other 123 participants had answered the item).

The missing data in the 32 cases mentioned above were imputed through two methods. First, the method of case mean substitution, as described by Schlomer et al. (2010) was selected for measures that used Likert-type scales (e.g., ECR, IHNI). The decision to use case mean substitution was based upon two factors: (a) the limited nature of missing data overall, and (b) the desire to use within-case data to impute missing data (as opposed to using regression methods across cases) given that the sample at large includes a wide range of sexual orientations (e.g., gay, bisexual, queer). Second, the PSSS scale used a categorical method to measure support by requiring respondents to select either “yes,” “no,” or “don’t know” to a total of 40 items, 20 of which measured family PSS and 20 which measured friend PSS. Procidano and Heller (1983), the authors of the PSSS scale, required that “yes” responses received a quantitative score of one, while “no” and “don’t know” responses received a quantitative score of zero. The authors did not provide information for how to score missing data within their scale.

In the absence of information about how to impute missing data within this scale by its authors, and by other authors who have used this scale, the decision was made to score missing responses as a zero, as this seemed to be the most conservative choice. This was done for a total of 11 missing scores, which comprised 0.0022% (i.e., 11 of 5000) of the total PSS data for this study. Lastly, following all data imputation, the necessary items were reverse scored, and scale scores were tabulated for all scales and subscales, based upon the procedures outlined by its respective authors. All scale scores were continuous variables.

Assumptions. The assumptions for multiple regression, as described by Tabachnick and Fidell (2007) include (a) the absence of univariate outliers among the predictor and criterion variables, (b) the absence of multivariate outliers, (c) the absence of multicolinearity, (d) normality, (e) linearity, (f) homoscedasticity, and (g) independence of errors.

First, data were examined for univariate outliers among the predictor and criterion variables. Values that exceed 3.29 standard deviations from the mean are considered to be univariate outliers (Tabachnick & Fidell, 2007). No univariate outliers were found on either the attachment anxiety or attachment avoidance subscales of the Experiences in Close Relationships Scale, nor were univariate outliers found within either the family or friend subscales of the Perceived Social Support Scale. However, one univariate outlier was found within the Internalized Homonegativity Inventory, and was adjusted to within one unit of the next highest score, as outlined by Tabachnick and Fidell (2007). Second, the data were examined for multivariate outliers based upon Mahalanobis distance tests (Tabachnick & Fidell, 2007). Based upon the results of a chi-square test, $\chi^2(5, N = 124) = 20.515$, $p < .001$, this assumption was upheld for all cases.

Third, the correlations between the predictors (attachment anxiety and family PSS; attachment avoidance and family PSS; attachment anxiety and friend PSS; attachment avoidance and friend PSS) for each of the four regression equations were examined in order to assess for multicolinearity. Tabachnick and Fidell (2007) posited that correlations above .70 may indicate multicolinearity. None of the correlations between the predictor variables in the four regression equations exceeded .70 (see Table 2), thereby upholding the assumption.

Table 2

Intercorrelations among Variables

Variable	1	2	3	4	5
1. Attachment Anxiety					
2. Attachment Avoidance	.201*				
3. Family PSS	-.304**	-.345**			
4. Friend PSS	-.333**	-.460**	.382**		
5. IH	.314**	.251**	-.249**	-.209*	

**$p < 0.01$ level (1-tailed). *$p < 0.05$ level (1-tailed)

Fourth, normality for all of the predictor and criterion variables were assessed by referencing values of skewness and kurtosis (see Table 3) as well as through a visual examination of residual histograms, in comparison to those illustrated in Tabachnick and Fidell (2007). Given that each variable was normally distributed, the assumption was upheld.

Table 3

Descriptive and Normality Statistics

Variable	α	*M*	*SD*	Skewness	Kurtosis
Attachment Anxiety	0.91	4.36	1.05	-.15	-.14
Attachment Avoidance	0.93	3.28	1.10	.56	.01
Family PSS	0.93	10.81	6.41	-.15	-1.32
Friend PSS	0.87	15.69	4.36	-1.09	.45
IH	0.88	40.63	12.94	.76	-.08

Fifth, the assumptions of linearity and homoscedasticity were assessed through the visual examination of residual scatterplots, and were found to be dispersed within a rectangular distribution, with scores anchored along the center, which Tabachnick and Fidell (2007) suggests uphold these assumptions. Last, the assumption of independence of errors between each of the predictors and the criterion variable were examined through the Durbin-Watson statistic. Field (2009) posits that a value of less than one or greater than three is problematic and may indicate non-independence of errors. Given that all values fell within this range (see Table 4), the assumption was upheld.

Table 4

Durbin-Watson Statistics

Predictor Variable Regressed on IH	Durbin-Watson Statistic
Attachment Anxiety	1.809
Attachment Avoidance	1.702
Family PSS	1.772
Friend PSS	1.800

Discussion of intercorelations among variables. In examining the intercorelations among variables (see Table 2), several notable findings emerged. First, consistent with the literature that was reviewed in chapter two, the first two hypotheses of this study were supported: (a) a positive moderate relation exists between attachment anxiety and IH ($r = .314$, $p < .01$), and (b) a positive low relation exists between attachment avoidance and IH ($r = .251$, $p < .05$), suggesting that participants who experienced greater attachment anxiety and attachment avoidance experienced higher levels of IH. Second, the reviewed literature in chapter two provided reasons to believe that perceptions of friend and family social support may differ. However, a moderate, yet significant relation ($r = .382$, $p < .01$) was found between the two, suggesting that individuals who perceive their family to be supportive, also perceive their friends in this manner. Third, also consistent with the literature in chapter two, all variables were found to be significantly related with each other at low to moderate levels (e.g., attachment anxiety and attachment avoidance positively associated with IH; attachment anxiety and attachment avoidance negatively associated with family PSS and friend PSS; family PSS and friend PSS negatively associated with IH), suggesting that prior to analyses, mediation was possible for all four models, as described below.

Mediation Analyses

Four mediated regression models were analyzed based upon procedures outlined by Baron and Kenny (1986). These authors outlined four steps. In the context of the mediation models of this study, the first step was to determine whether a significant relation existed between the predictor variable (e.g., attachment anxiety, attachment avoidance) and the criterion variable of IH, thus establishing that a relation exists which may be mediated. If found, the second step is to determine whether a significant relation exists between the predictor variable

and the mediator variable (e.g., family PSS, friend PSS). If found, the third step is to determine whether a significant relation exists between the mediator variable and the criterion variable of IH when the predictor variable is held constant. If found, the fourth step is to determine whether the mediating variable significantly mediates the relation between the predictor variable and the criterion variable. A mediating effect is found when the relation between the predictor variable and the criterion variable is significantly reduced when the mediator variable is present, which in this study, will be determined through a Sobel significance test. When a Sobel test statistic produces a p-value less than .05, a significant mediating effect is found; when the p-value is equal to or greater than .05, the mediating variable is determined to only be a significant (additional) predictor of the criterion variable, as was discovered in step three. Below, the results of the four mediated regression models of this study are described through the aforementioned steps.

Attachment anxiety. Family PSS was analyzed as a mediator of the relation between attachment anxiety and IH. The first step for this analysis showed that a significant relation existed between attachment anxiety and IH ($F[1,122] = 13.379$, $p < .001$). The second step showed that a significant relation existed between attachment anxiety and family PSS ($F[1,122] = 12.435$, $p = .001$). The third step showed that when attachment anxiety was held constant, family PSS was moderately, but non-significantly related with IH ($t = -1.899$, $p = .06$). This third step demonstrated that (a) family PSS was a non-significant predictor of IH when both family PSS and attachment anxiety were regressed on IH in the same equation, and therefore (b) it was not possible for family PSS to mediate the relation between attachment anxiety and IH, failing to support the third hypothesis. For additional statistics for this analysis, see Table 5.

Table 5

Family PSS as a Mediator of the Relation between Attachment Anxiety and IH

Variable	R^2	*B*	*SE*	*β*	*t*	*p*	sr^2
	.125					< .001	
Attachment Anxiety		3.224	1.095	.263	2.944	.004	.063
Family PSS		-.342	.180	-.169	-1.899	.060	.026

Friend PSS was analyzed as a mediator of the relation between attachment anxiety and IH. The first step for this analysis showed that a significant relation existed between attachment anxiety and IH ($F[1,122] = 13.379$, $p < .001$). The second step showed that a significant relation existed between attachment anxiety and friend PSS ($F[1,122] = 15.266$, $p < .001$). The third step showed that when attachment anxiety was held constant, friend PSS was not significantly related with IH ($t = -1.290$, $p = .2$). This third step demonstrated that (a) friend PSS was a non-significant predictor of IH when both friend PSS and attachment anxiety were regressed on IH in the same equation, and therefore (b) it was not possible for friend PSS to mediate the relation between attachment anxiety and IH, failing to support the fourth hypothesis. For additional statistics for this analysis, see Table 6.

Table 6

Friend PSS as a Mediator of the Relation between Attachment Anxiety and IH

Variable	R^2	*B*	*SE*	*β*	*t*	*p*	sr^2
	.111					.001	
Attachment Anxiety		3.377	1.115	.275	3.027	.003	.067
Friend PSS		-.349	.270	-.117	-1.290	.199	.012

Attachment avoidance. Family PSS was analyzed as a mediator of the relation between attachment avoidance and IH. The first step for this analysis showed that a significant relation existed between attachment avoidance and IH (F[1,122] = 8.211, p = .005). The second step showed that a significant relation existed between attachment avoidance and family PSS (F[1,122] = 16.521, p < .001). The third step showed that when attachment avoidance was held constant, family PSS was significantly related with IH (t = -2.003, p = .047). This demonstrated that attachment avoidance and family PSS were both significant predictors of IH when both were regressed on IH in the same equation. However, in order to determine whether family PSS significantly mediated the relation between attachment avoidance and IH, a Sobel test was required. The result of the Sobel test indicated that family PSS did not significantly mediate the relation between attachment avoidance and IH (t = 1.80, SE = .42, p = .07), thereby failing to support the fifth hypothesis. For additional statistics for this analysis, see Table 7.

Table 7

Family PSS as a Mediator of the Relation between Attachment Avoidance and IH

Variable	R^2	*B*	*SE*	*β*	*t*	*p*	sr^2
	.093					.003	
Attachment Avoidance		2.196	1.082	.187	2.031	.044	.031
Family PSS		-.373	.186	-.185	-2.003	.047	.030

Friend PSS was analyzed as a mediator of the relation between attachment avoidance and IH. The first step for this analysis showed that a significant relation existed between attachment avoidance and IH (F[1,122] = 8.211, p = .005). The second step showed that a significant relation existed between attachment avoidance and friend PSS (F[1,122] = 32.674, p < .001).

The third step showed that when attachment avoidance was held constant, friend PSS was not significantly related with IH (t = -1.206, p = .23). This third step demonstrated that (a) friend PSS was a non-significant predictor of IH when both friend PSS and attachment avoidance were regressed on IH in the same equation, and therefore (b) it was not possible for friend PSS to mediate the relation between attachment avoidance and IH, failing to support the sixth hypothesis. For additional statistics for this analysis, see Table 8.

Table 8

Friend PSS as a Mediator of the Relation between Attachment Avoidance and IH

Variable	R^2	*B*	*SE*	*β*	*t*	*p*	sr^2
	.074					.009	
Attachment Avoidance		2.304	1.155	.197	1.995	.048	.031
Friend PSS		-.353	.293	-.119	-1.206	.230	.011

Post-hoc Analyses

Several post-hoc analyses were performed. First, the demographic variables of ethnicity and race were examined across the other variables in this study. Second, sexual orientation outness data, which was initially collected in order to describe the sample, was examined in greater depth. Third, the dimensions of sexual orientation (e.g., self-identification, sexual behavior, sexual attraction) were further examined through their correlations with sexual orientation outness and IH. Last, the interaction between attachment anxiety and attachment avoidance was examined. It should be noted that all analyses in this section that involved sexual orientation outness included 122 cases instead of the 124 that were included in the previous analyses, given that 2 cases were removed because they had more than 10% of the data missing from the Outness Inventory measure.

Ethnicity and race. First, the means from the variables (attachment anxiety, attachment avoidance, Family PSS, Friend PSS, IH, and sexual orientation outness) in this study were examined across ethnicity and race. This seemed important, given that previous literature, as documented in chapter 2, has failed to capture the experiences of sexual minority men who also have an ethnic and/or racial minority identity. And although efforts were made to recruit a more ethnically and racially diverse sample, as described in chapter 3, the current sample was predominantly non-Hispanic/Latino, and White (see Tables 9 and 10 for variable means).

Table 9

Variable Means by Ethnicity

Ethnicity	N	Outness	Attachment Anxiety	Attachment Avoidance	Family PSS	Friend PSS	IH
Hispanic/ Latino	10	3.44	4.36	3.92	12.80	16.40	34.13
Non-Hispanic/ Latino	112	3.61	4.35	3.23	10.62	15.66	41.39

Table 10

Variable Means by Race

Race	N	Outness	Attachment Anxiety	Attachment Avoidance	Family PSS	Friend PSS	IH
Caucasian/ White	102	3.65	4.30	3.23	11.01	15.91	40.41
Asian American	4	1.95	5.15	2.96	9.75	13.00	51.50
Caribbean/ West Indian	4	3.65	5.72	4.47	4.75	16.25	47.25
African American/ Black	3	3.35	3.41	2.96	12.67	18.33	34.05
Asian	2	3.40	3.64	4.20	9.50	12.50	43.87
Biracial	2	3.35	4.33	3.69	4.50	11.00	49.50
Other	5	4.58	4.40	3.19	12.50	14.75	24.75

In visually examining Tables 8 and 9, there appear to be some differences. However, conducting an ANOVA to determine if these differences were significant was not appropriate, given that dramatic differences in sample size were present (i.e., the sample was mostly non-Hispanic/Latino, and Caucasian/White).

Sexual orientation outness. Sexual orientation outness was examined beyond its initial descriptive intent. Recent literature suggests that sexual orientation outness is influenced by attachment, and further, related with IH. Specifically, Mohr and Fassinger (2003) argue that attachment influences sexual orientation outness among sexual minorities. These authors argue that attachment style is linked with emotional regulation, and ability to assess and seek out support during times of need and distress. They suggest that sexual minorities are recipients of negative messages, and in response, must find ways to cope, which are likely to include emotional regulation, and ability to seek support from others. Additionally, a review of the empirical literature that has examined the relation between sexual orientation outness and IH was conducted by Szymanski, Kashubeck-West, and Meyer (2008b). In reviewing fourteen recent studies that have examined this relation, these authors reported that this body of scientific literature documents that sexual minorities who are more "out," experience less IH. Specifically, these 14 studies yielded 29 specific correlations, which "ranged from -.23 to -.64, with an average medium effect size of -.41." Additionally, a more recent study (Frost & Meyer, 2009) found a significant relation between sexual orientation outness and IH (r = -.43, p < .01). Consistent with these recent findings, this study also found a statistically significant relation between sexual orientation outness and IH (r = -.506, p < .01), suggesting a large effect in this study.

Prior to analyses of sexual orientation outness, the data collected from the Outness Inventory was cleaned for missing data. Two cases from the 124 that comprised the sample for this study had more than 10% of the data missing and were therefore removed, leaving 122 cases for this post-hoc analysis. Seven additional cases had 10% (1 item) missing. Based upon recommendations by J.J. Mohr (personal communication, May 20, 2011), missing data were not imputed. Rather, the total scale score for these seven cases were tabulated by calculating the average of the remaining nine items. Additionally, this data was checked for the assumptions of multiple regression. In doing so, no univariate outliers were found, and the assumption of multicolinearity was upheld, as evidenced by the correlations listed in Table 10. A normal distribution was found, based upon Skewness (-.043) and kurtosis (-.126) scores, and the assumptions of linearity and homoscedasticity were upheld, as assessed through the visual examination of residual scatterplots. Lastly, the assumption of independence of errors was found between sexual orientation outness and IH, as documented by a Durbin-Watson statistic (1.788). Additionally, the full-scale Outness Inventory (M = 3.6, SD = 1.24) had high internal consistency (Cronbach alpha of .80).

The initial step in the examination of sexual orientation outness included its correlations with the other variables that were examined in this chapter. As Table 11 demonstrates, sexual orientation outness was significantly related to all variables.

Table 11

Intercorrelations among Variables

Variable	1	2	3	4	5	6
1. Sexual Orientation Outness						
2. Attachment Anxiety	-.175*					
3. Attachment Avoidance	-.255**	.200*				
4. Family PSS	.168*	-.306**	-.345**			
5. Friend PSS	.238**	-.337**	-.469**	.385**		
6. IH	-.506**	.328**	.254**	-.250**	-.213**	

**$p < 0.01$ level (1-tailed). *$p < 0.05$ level (1-tailed)

Next, sexual orientation outness was examined in terms of its effect on IH. A simultaneous multiple regression analysis was conducted, with the full-scale score of sexual orientation outness, attachment anxiety, attachment avoidance, Family PSS, and Friend PSS all acting as predictors of IH. The results of this analysis are listed in Table 12. This analysis demonstrated that when all variables were simultaneously regressed on IH, sexual orientation outness and attachment anxiety were significant predictors of IH, with sexual orientation outness accounting for a greater percentage of the variance in IH (17.6%) than any other variable.

Table 12

Summary of Simultaneous Multiple Regression Analysis

Variable	R^2	*B*	*SE*	β	*t*	*p*	sr^2
	.331					< .001	
Sexual Orientation Outness		-4.618	.835	-.441	-5.528	< .001	.176
Attachment Anxiety		2.690	1.014	.219	2.653	.009	.040
Attachment Avoidance		.984	1.038	.084	.948	.345	.005
Family PSS		-.192	.172	-.096	-1.117	.266	.007
Friend PSS		.125	.274	.042	.457	.648	.001

Additionally, given that Mohr (2001) suggests that sexual orientation outness may vary within sexual minorities in terms of how out they are to the world, family, and religion, his Outness Inventory is comprised of these three subscales. Given this delineation, three additional sequential regression analyses were conducted in order to determine how much of the variation in IH is accounted for by these three subscales. The results are listed below in Table 13 (Out to World, Table 14 (Out to Family), and Table 15 (Out to Religion), and document that the Out to World (13.9%) and Out to Family (15.2%) subscales accounted for a significant proportion of the variance in IH while the Out to Religion subscale (0.2%) did not. However, it is important to note that over half of the participants listed "not applicable" to the two items that comprise the Out to Religion subscale, significantly limiting the data in this area.

Table 13

Summary of Simultaneous Multiple Regression Analysis

Variable	R^2	*B*	*SE*	β	*t*	*p*	sr^2
	.313					< .001	
Out to World		-3.049	.642	-.397	-4.746	< .001	.139
Attachment Anxiety		3.528	1.057	.288	3.339	.001	.069
Attachment Avoidance		1.897	1.065	.163	1.781	.078	.020
Family PSS		-.171	.183	-.086	-.939	.350	.005
Friend PSS		.404	.297	.135	1.358	.177	.011

Table 14

Summary of Simultaneous Multiple Regression Analysis

Variable	R^2	*B*	*SE*	*β*	*t*	*p*	sr^2
	.313					< .001	
Out to Family		-3.557	.711	-.417	-5.000	< .001	.152
Attachment Anxiety		2.872	1.050	.232	2.734	.007	.045
Attachment Avoidance		1.258	1.071	.108	1.175	.243	.008
Family PSS		-.038	.181	-.019	-.213	.832	<.001
Friend PSS		.036	.282	.012	.127	.899	<.001

Table 15

Summary of Simultaneous Multiple Regression Analysis

Variable	R^2	*B*	*SE*	*β*	*t*	*p*	sr^2
	.157					.001	
Out to Religion		-.295	.548	-.046	-.539	.591	.002
Attachment Anxiety		3.146	1.135	.257	2.770	.007	.056
Attachment Avoidance		1.797	1.158	.154	1.552	.123	.017
Family PSS		-.230	.193	-.114	-1.187	.238	.010
Friend PSS		-.029	.306	.010	-.096	.923	<.001

Additional post-hoc analyses were conducted in order to examine whether sexual orientation outness mediated and/or moderated the relations between attachment anxiety and IH, and attachment avoidance and IH, respectively. Given the lack of empirical research in this area, it is unknown whether being more out leads to less IH, if experiencing less IH leads to being more out, or if a transactional relation exists (e.g., both influence each other). It is important to highlight that a decision was made to not examine IH as a mediator or moderator variable in

these post-hoc analyses given that this study focused its examination on IH as an outcome variable. As previously stated, the vast majority of research in this area has examined the outcomes associated with IH, but not why IH levels vary between sexual minorities. As a result, IH was consistently examined as an outcome variable in this study in order to better understand why it varied in this sample.

In analyzing sexual orientation outness as a mediator of the relation between attachment anxiety and IH, the first step showed that a significant relation existed between attachment anxiety and IH ($F[1,120] = 14.493$, $p < .001$). The second step showed that a significant relation did not exist between attachment anxiety and sexual orientation outness ($F[1,120] = 3.771$, $p = .054$). As a result, this analysis demonstrated that sexual orientation outness did not mediate the relation between attachment anxiety and IH.

In analyzing sexual orientation outness as a mediator of the relation between attachment avoidance and IH, the first step showed that a significant relation existed between attachment avoidance and IH ($F[1,120] = 8.262$, $p = .005$). The second step showed that a significant relation existed between attachment avoidance and sexual orientation outness ($F[1,120] = 8.336$, $p = .005$). The third step showed that when attachment avoidance was held constant, a significant relation existed between sexual orientation outness and IH ($t = -5.844$, $p < .001$). However, in order to determine whether sexual orientation outness significantly mediated the relation between attachment avoidance and IH, a Sobel test was required. The result of the Sobel test indicated that sexual orientation outness significantly mediated the relation between attachment avoidance and IH ($t = 2.6$, $SE = .54$, $p = .009$). For additional statistics for this analysis, see Table 16.

Table 16

Sexual Orientation Outness as a Mediator of the Relation between Attachment Avoidance and IH

Variable	R^2	*B*	*SE*	*β*	*t*	*p*	sr^2
	.273					< .001	
Attachment Avoidance		1.559	.994	.133	1.651	.101	.017
Sexual Orientation Outness		-4.951	.847	-.472	-5.844	< .001	.209

Additionally, sexual orientation outness was analyzed as a moderator of the relation between attachment anxiety and IH. However, as shown in Table 17, a significant moderating effect was not found ($\Delta R^2 = .005$, $p = .410$).

Table 17

Sexual Orientation Outness as a Moderator: Attachment Anxiety and IH

Variable	R^2	Adjusted R^2	ΔR^2	F Change	Sig. F Change	B	*β*	*t*
Model 1								
Attachment Anxiety	.108	.100		14.493	.000	4.025	.328	4.925
Model 2					.410			
Attachment Anxiety						4.071	.332	3.840
Attachment Anxiety x Sexual Orientation Outness	.113	.098	.005	.682		1.008	.071	.826

Similarly, sexual orientation outness was not found to be a significant moderator of the relation between attachment avoidance and IH ($\Delta R^2 = .005$, $p = .669$), as shown in Table 18. Taken together, these two moderation analyses suggest that outness levels did not significantly influence the relations between attachment anxiety and IH, and attachment avoidance and IH.

Table 18

Sexual Orientation Outness as a Moderator: Attachment Avoidance and IH

Variable	R^2	Adjusted R^2	ΔR^2	F Change	Sig. F Change	B	β	*t*
Model 1								
Attachment Avoidance	.064	.057		8.262	.005	2.966	.254	8.683
Model 2					.669			
Attachment Avoidance						2.951	.253	2.849
Attachment Avoidance x Sexual Orientation Outness	.066	.050	.001	.183		.452	.038	.428

Dimensions of sexual orientation. As previously discussed, the inclusion criteria of a minority sexual orientation was determined through a combination of self-identification, sexual behavior, and sexual attraction, as developed by the Williams Institute (2009). Given that each of these dimensions are believed to be unique (although having some overlap), a correlational analysis was conducted in order to examine their unique relations with sexual orientation outness and IH. As documented in Table 19 below, the findings show that the only dimension of sexual orientation that was significantly related to sexual orientation outness (r = -.222) or IH (r = .342) was sexual attraction. These findings imply that gay and bisexual men in this sample who were more attracted to other men were less out, and experienced greater IH.

Table 19

Intercorrelations between Dimensions of Sexual Orientation, Outness, and IH

Variable	1	2	3	4	5	6
1. Self-Identification						
2. Sexual Behavior	.016					
3. Sexual Attraction	.235**	.036				
4. Sexual Orientation Outness	-.030	-.135	-.222*			
5. IH	.118	.131	.342**	-.506**		

**$p < 0.01$ level (1-tailed). *$p < 0.05$ level (1-tailed)

Interaction between attachment anxiety and attachment avoidance. The interaction between attachment anxiety and attachment avoidance was examined through hierarchical regression. A post-hoc analysis examined whether the interaction between attachment anxiety and attachment avoidance significantly predicted IH, after accounting for the predictors of attachment anxiety and attachment avoidance alone. Prior to this analysis, all variables were standardized, and an interaction variable was created. A hierarchical regression analysis was conducted with the first step analyzing the effect of attachment anxiety and attachment avoidance on IH. In the second step, the interaction variable between attachment anxiety and attachment avoidance was added. Table 20 lists the results of this analysis, which documents that the interaction variable in step two did not significantly predict IH ($\Delta R^2 = .005$, $p = .39$).

Table 20

Summary of Hierarchical Regression Analysis

Variable	R^2	ΔR^2	*B*	*SE*	β	*t*	*p*	sr^2
Step 1	.145						< .001	
Attachment anxiety			.289	.087	.289	3.340	.001	.080
Attachment avoidance			.196	.087	.196	2.263	.025	.037
Step 2	.150	.005					.39	
Attachment anxiety x Attachment avoidance			.075	.087	.076	.863		.005

Chapter 5

Discussion

This study focused its investigation on the concealable stigma of minority sexual orientation. Extensive research on sexual minorities (for a review see Syzmanski, Kashubeck-West, & Meyer, 2008b) has documented that this population is exposed to negative heterosexist messages from society (e.g., individuals, groups, institutions). These messages are centered on the notion that who they are, based upon their sexual orientation is wrong, shameful, and immoral. As a result, all sexual minority men internalize these negative messages to some degree, and develop feelings of self-hatred (i.e., internalized heterosexism [IH]). The vast body of research which has examined IH has investigated its negative effects (Syzmanski et al). However, limited research has focused on why IH levels vary between sexual minority men. As a result, the primary research question of this study became, "What factors influence the development of IH in sexual minority men?" It is critical to investigate this question in order to learn how sexual minority men can overcome feelings of self-hatred as well as develop greater psychological health and more fulfilling and meaningful relationships with others.

In reviewing the literature in order to hypothesize the factors that may serve to influence IH in sexual minority men, the literature on attachment (i.e., one's pattern of relating to others based upon developed expectations of self and others as a means of achieving a sense of felt security [Bowlby, 1969/1973]) and perceived social support (PSS; i.e. the belief that others are available to provide support, care, and to meet one's needs [Cobb 1976; Kaplan, Cassel, & Gore, 1977]) appeared promising. Specifically, the empirical body of literature on attachment documents that low attachment anxiety and low attachment avoidance is associated with greater psychological health, greater interpersonal skills, and more satisfying relationships for both

heterosexuals and sexual minorities (for a review see Mikulincer & Shaver, 2007). Similarly, the empirical body of literature on PSS documents that high levels of PSS are associated with greater psychological health, greater interpersonal skills and more satisfying relationships among both heterosexuals and sexual minorities (Anders & Tucker, 2000; Anderson, 1998; Cohen, Sherrod, & Clark, 1986; Elizer & Mintzer, 2003; Kurdek, 1988; Kurdek & Schmitt, 1987; Moller, Fouladi, McCarthy, & Hatch, 2003; O'Donnell et al., 2002; Pierce, Sarason, & Sarason, 1991; Rosario, Schrimshaw, & Hunter, 2005; Schaefer, Coyne, & Lazarus, 1981; Uchino, Cacioppo, & Kiecolt-Glaser, 1996).

In reviewing the literature that investigated the relations between attachment and IH (Jellison & McConnell, 2003; Sherry, 2007), attachment and PSS (Anders & Tucker, 2000; Collins & Feeney, 2004; Florian, Mikulincer, Bucholtz, 1995; Ognibene & Collins, 1998), and PSS and IH (Nicholson & Long, 1990; Otis & Skinner, 1996; Shidlo, 1994; Szymanski & Carr, 2008), only a limited number of studies were found. These studies consistently found that low attachment anxiety and low attachment avoidance, as well as high levels of PSS were related with less IH in sexual minority men. It is important to note, however, that these studies used antiquated measures to assess these constructs and had numerous methodological limitations.

Based upon the aforementioned literature, this study focused its examination on whether the constructs of attachment and perceived social support could explain the variance in IH among sexual minority men. In doing so, limitations from previous studies were taken into account. Specifically, attachment was examined along the orthogonal dimensions of attachment anxiety and attachment avoidance, consistent with the current conceptualization offered by attachment researchers (Brennan, Clark, & Shaver, 1998). Perceived social support was examined through family PSS and friend PSS, as literature suggests that sexual minority men have different

relations with their family members and friends (Anderson, 1998; Grossman, D'Augelli, & Hershberger, 2000; Grossman & Kerner, 1998; Kurdek, 1988; Kurdek & Schmitt, 1987; Mufioz-Plaza, Quinn, & Rounds, 2002). Based upon the current conceptualization of attachment, and the delineation of PSS by family and friends, this study examined whether attachment anxiety (hypothesis one) and attachment avoidance (hypothesis two) predicted IH levels in sexual minority men. Additionally, given that attachment and PSS are both based upon developed expectations of whether others are available to meet one's needs, and that both have been shown to be related to IH, it was worthy of examination to investigate PSS as a mediator of the relation between attachment and IH. Thus, this study examined whether family PSS and friend PSS mediated the relations between attachment anxiety and IH, and attachment avoidance and IH, respectively (hypotheses three, four, five, and six).

In summarizing the findings, this chapter first examines and offers interpretations of the results. Then, the ways in which this study improved and expanded upon previous literature is discussed. The limitations of this study are also described. The chapter ends with a discussion of the implications for theory, research and practice.

Findings

Attachment. Attachment anxiety ($r = .314$, $p < .01$) and attachment avoidance ($r = .251$, $p < .01$) were found to be positively and significantly related to IH. These findings support the hypotheses that attachment anxiety (hypothesis one) and attachment avoidance (hypotheses two) predicted IH, although it is important to note that they were only modest predictors. This suggests that when sexual minority men experienced a more secure pattern of attachment (i.e., either less attachment anxiety or less attachment avoidance), they also experienced less IH, which is consistent with previous studies that found a negative relation between secure

attachment and IH (r = -.40; p < .05, Jellison & McConnell, 2003; r = -.41, no p-value given; Sherry, 2007).

Conceptually, this finding was not surprising, given that Mohr (2008) suggests that attachment influences IH levels; not vice versa. His argument is based upon the notion that in order to protect themselves from the discriminatory and heterosexist culture in which they live, sexual minorities must "learn to identify potential sources of threat (p.492)," which is congruent with how attachment patterns develop. Therefore, one's pattern of attachment (i.e., in part, the manner in which one perceives threat) influences one's level of IH (i.e., the manner in which one perceives and subsequently internalizes harmful heterosexist messages).

Additionally, attachment anxiety was found to account for approximately twice the variance in IH (6.3%) than attachment avoidance (3.1%) in the mediation analyses in which family PSS was examined. Similarly, attachment anxiety accounted for approximately twice the variance in IH (6.7%) than attachment avoidance (3.1%) in the mediation analyses in which friend PSS was examined. Moreover, a post-hoc analysis showed that the interaction between attachment anxiety and attachment avoidance did not account for a significant portion of the variance in IH. Given the relatively small difference in variance in IH that was accounted for between attachment anxiety and attachment avoidance, and the limited research in this area of study, it is unclear whether attachment anxiety and attachment avoidance have different relations with IH.

In sum, this study found that although significantly related with IH, attachment anxiety and attachment avoidance were only modest predictors, explaining only some of the variance in IH levels. This suggests that other factors contribute to the variation in IH levels in sexual minority men.

Perceived social support. Family PSS (r = -.249, p < .01) and friend PSS (r = -.209, p < .05) were negatively and significantly related to IH, suggesting that participants who perceived their family and friends to be more supportive experienced less IH. These findings suggest that family PSS and friend PSS are modest predictors of IH, which is consistent with the limited number of previous studies that found a relation between IH and general PSS (r = -.45, no p-value provided, Nicholson, 1990; r = -.41, p < .01, Shidlo, 1994; r = -.30, p < .01, Szymanski & Carr, 2008), friend PSS (r = -.13, p < .05; Otis & Skinner, 1996) and partner PSS (r = -.09, p < .05, Otis & Skinner, 1996).

Additionally, previous literature has documented that family support networks and friend support networks of sexual minority men differ in terms of the number of members, the support they offer, and the level of satisfaction they yield (Anderson, 1998; Grossman, D'Augelli, & Hershberger, 2000; Grossman & Kerner, 1998; Kurdek, 1988; Kurdek & Schmitt, 1987; Mufioz-Plaza, Quinn, & Rounds, 2002). However, no study prior to this one had examined the delineated relations between family PSS and IH, and friend PSS and IH within the same sample. In doing so, this study found two modest differences between family PSS and friend PSS. First, family PSS accounted for approximately twice the variance in IH (2.6%) as compared to friend PSS (1.2%) in the mediation analyses that examined attachment anxiety. Similarly, family PSS accounted for almost three times the variance in IH (3.0%) as compared to friend PSS (1.1%) in the mediation analyses that examined attachment avoidance. Second, family PSS was found to be a significant predictor of IH (t = -2.003, p = .047) when attachment avoidance was held constant while this was not true for friend PSS. However, the difference in this second finding may have been attributable to the sample size (N =124) being unable to detect small effects (i.e., the sample was only able to detect a medium effect of .125). Despite these two modest

differences between family PSS and friend PSS, it is important to note that the relation between family PSS and friend PSS was found to be significant, suggesting that sexual minority men in this sample who perceived their family to be supportive also perceived their friends to be supportive to a modest degree ($r = .382$, $p < .01$).

In sum, this study found that although significantly related with IH, family PSS and friend PSS were only modest predictors, explaining only some of the variance in IH levels. This suggests that other factors contribute to the variation in IH levels in sexual minority men.

Mediation analyses. This study was the first of its kind to examine PSS as a mediator of the relation between attachment and IH in sexual minorities. Therefore, the major empirical bases for the mediation analyses in this study were the significant correlations between attachment, PSS, and IH that had been found in previous studies. Conceptually, it seemed possible that family PSS and friend PSS may mediate the relations between attachment anxiety and IH, and attachment avoidance and IH, respectively, given that the constructs of attachment (Bowlby, 1969/1982) and PSS (Cobb, 1976; Kaplan, Cassel, & Gore, 1977) are both based upon developed expectations of whether others are available to provide support. These empirical and conceptual bases influenced the hypotheses that family PSS and friend PSS would mediate the relations between attachment anxiety and IH, and attachment avoidance and IH, respectively.

However, despite these bases, family PSS was not found to significantly mediate the relation between attachment anxiety and IH (hypothesis three), or attachment avoidance and IH (hypothesis five). Similarly, friend PSS was not found to significantly mediate the relation between attachment anxiety and IH (hypothesis four), or attachment avoidance and IH (hypothesis six). Therefore, support for hypotheses three, four, five, and six were not found. Given that no prior studies have examined family PSS and friend PSS as mediators of the

relation between attachment and IH, comparing these findings to previous studies was not possible. However, a recent study (Szymanski, 2009) examined social support (in general, not delineated by family and friends) as a moderator of the relation between heterosexist events and psychological distress in sexual minority men, and also failed to find a significant moderating effect.

One possible explanation for why family PSS and friend PSS failed to mediate the relations between attachment anxiety and IH, and attachment avoidance and IH is that there were only moderate relations between family PSS and IH (r = -.249, p < .01) and friend PSS and IH (r = -.209, p < .05). Another possible explanation is that despite the argument made in chapter two, an individual's perception of whether others are supportive of them (i.e., the degree to which others support versus harass, judge, and devalue them based upon their sexual orientation) may not be a strong predictor of the degree to which they have internalized negative heterosexist messages. In a recent article by Herek, Gillis, and Cogan (2009), sexual stigma was delineated by *enacted sexual stigma* (i.e., overt actions of anti-gay discrimination and harassment by others), *felt sexual stigma* (i.e., the perceptions of sexual minorities as to whether others will enact sexual stigma), *and internalized sexual stigma* (i.e., internalized heterosexism). Based upon these definitions, these authors suggest that an individual's perception of whether others are supportive of them (i.e., felt sexual stigma), and the degree to which individuals internalize negative heterosexist messages are distinct aspects of sexual stigma.

Sexual orientation outness. A post-hoc analysis found that sexual orientation outness was negatively and significantly related with IH (r = -.506, p < .01), documenting that sexual minority men in this study who were more out experienced less IH. Based upon values offered by Cohen and Cohen (1983; .1 = small effect, .3 = medium effect, .5 = large effect), this finding

suggests that sexual orientation outness had a large effect on IH. This finding is consistent with 14 previous studies that also found a significant negative relation between sexual orientation outness and IH, ranging from -.23 to .-64 (for a review see Szymanski, Kashubeck-West, & Meyer, 2008b). Additionally, sexual orientation outness was found to be the strongest predictor of IH, independently accounting for 17.6% of the variance when the variables of sexual orientation outness, attachment anxiety, attachment avoidance, family PSS, and friend PSS were all simultaneously regressed on IH. It is also important to note that additional sequential regression analyses analyzed the predictive ability of the subscales of the Outness Inventory (Mohr, 2001) individually. These analyses showed that the subscales of Out to World (13.9%) and Out to Family (15.2%) accounted for a large proportion of the variance in IH. However, this was not true for the Out to Religion (0.2%) subscale, which suggests that unique relations exist between degree out outness with various groups, and internalized shame (i.e., IH).

Cohen and Cohen (1983) offered that accounting for 1% of the variance is a small effect, 9% is a medium effect, and 25% is a large effect. Based upon these values, this finding conservatively suggests a medium effect. Collectively, these findings suggest that sexual orientation outness was a major influencing factor in the variation of IH levels in sexual minority men in this study. However, the reason for this is not clear. One possibility is that the process of coming out may be easier for individuals who are less impacted by negative heterosexist messages. Another possibility is that the process of coming out may serve to lessen IH, as this process directly confronts the negative messages perpetrated by society and its members (Szymanski, Kashubeck-West, & Meyer, 2008a). However, given the limited research in this area, it is unknown if the process of coming out influences IH levels, or if IH levels influence one's ability to come out (Frost & Meyer, 2009).

Additionally, sexual orientation outness did not moderate the relations between attachment anxiety and IH, or between attachment avoidance and IH, nor did sexual orientation outness mediate the relation between attachment anxiety and IH. However, sexual orientation outness did significantly mediate the relation between attachment avoidance and IH (t = 2.6, SE = .54, p = .009). Specifically, for gay and bisexual men in this sample, experiencing higher levels of attachment avoidance led to increased sexual orientation outness which was associated with less IH. This is consistent with attachment theory (Bowlby, 1969) and empirical literature (Mikulincer & Shaver, 2007) which documents that individuals with high levels of attachment avoidance distance themselves emotionally from the evaluations of others (e.g., heterosexist messages perpetrated against sexual minorities). As a result, experiencing higher levels of attachment avoidance may have served as a protective mechanism for gay and bisexual men in this sample, allowing them to experience greater sexual orientation outness, and subsequently, less IH.

Additionally, in comparing the outness scores of this sample (M = 3.6, SD = 1.24) with the limited number of studies that have used the full-scale Outness Inventory (OI; Mohr & Fassinger, 2000) with sexual minority men (M = 4.90, SD = 1.34, Balsam & Mohr, 2007; M = 5.43, SD = 1.16, Solomon, Rothblum, & Balsam, 2004) this sample was less out. However, this may be due to the fact that these community samples included sexual minority men who ranged in age from teenage to elder age, suggesting a cohort effect may have played a role in outness levels. Additionally it is unclear whether this sample was more out relative to other samples of college-aged men, given that no known studies, other than this one, have used the OI with a sample of sexual minority college men exclusively.

In sum, sexual orientation outness was found to be a major influencing factor in the

variation of IH levels in sexual minority men in this study. However, this finding does not imply that sexual minority men should increase their level of outness as a means of lessening their levels of IH, as the causal pathway of this relation was not examined, and because the process of coming out is complex and deserves thoughtful consideration.

Interactions between predictor variables. Based upon a simultaneous regression analysis (see Table 11), the variables of sexual orientation outness (17%), attachment anxiety (4.0%), attachment avoidance (0.5%), family PSS (0.7%), and friend PSS (0.1%) independently accounted for 22.9% (Σsr^2) of the variance in IH. However, taken as a whole, these variables accounted for 33.1% (R^2) of the variance in IH. This suggests that 10.2% of the variance in IH was accounted for by the interaction between these variables. Given that previous attachment literature has documented that an interaction between attachment anxiety and attachment avoidance may exist (for a review see Mikulincer and Shaver, 2007) a post-hoc analysis was conducted. However, this analysis showed that the interaction between attachment anxiety and attachment avoidance accounted for less than 1% of the variance in IH, and was non-significant. As a result, it is unclear how the interactions between the aforementioned predictor variables influenced IH levels.

However, minority stress theory (Meyer, 1995, 2003) states that individuals from minority groups, such as sexual minorities experience unique stressors related to their minority status (e.g., heterosexist messages, and subsequently, IH), in addition to the stressors experienced by those from majority groups (e.g., financial strain, pressures to succeed). As a result, the combination of these unique and universal stressors may reciprocally influence the constructs of attachment anxiety, attachment avoidance, family PSS, friend PSS, and sexual orientation outness, resulting in a unique interaction of variables that influence IH levels.

How This Study Improved and Expanded Upon Previous Research

Given the limited research in this area, this study was the first of its kind in many ways. This subsection begins by discussing how the nature of this investigation examined IH from a unique perspective. Second, by examining sexual minority men who are currently enrolled in an institution of higher education this study controlled for three confounding variables present in the majority of past IH research. Third, the constructs of attachment and PSS were assessed with up-to-date measures, and sexual orientation was assessed more broadly, based upon its current conceptualization within the sexual minority culture. Last, efforts were made to recruit a diverse range of ethnicity, race, geographical location, and sexual orientation outness given that many prior studies have failed to do so (Szymanski, Kashubeck-West, & Meyer, 2008b).

Nature of the investigation. This study focused its investigation on the factors which serve to influence IH levels. This approach was novel given that the vast majority of prior research in this area examined the effects of experiencing high levels of IH (for a review see Syzmanski, Kashubeck-West, & Meyer, 2008b). Given that only recent research attention has focused on why IH levels vary in sexual minority men, this study was one of the first to examine the factors of attachment and PSS as predictors of IH. Additionally, this study was also the first of its kind to examine a factor (i.e., PSS) that may serve to mediate the relation between a potential predictor of IH (i.e., attachment) and IH. This was done as an attempt to develop a more thorough understanding of how several factors may interact to influence IH levels in sexual minority men.

Population examined. This study controlled for three confounding variables that were not accounted for in the majority of previous studies in this area of research: education level (i.e., currently enrolled in an institution of higher education), age (i.e., 18 – 25) and birth sex (i.e.,

male). Controlling for education was important given that the vast majority of previous studies on sexual minorities have focused on non-college populations (Meyer & Wilson, 2009). It was also important to control for age and birth sex given that sexual minorities from different generations have been exposed to varying degrees and types of heterosexist messages (Rostosky, Riggle, Horne, & Miller, 2009) and that IH is experienced uniquely between men and women (Syzmanski, Kashubeck-West, & Meyer, 2008a).

Assessment of attachment, perceived social support and sexual orientation. This study used the most up-to-date measures of attachment and PSS that reflected the current conceptualization of these constructs. Specifically, this study investigated attachment orthogonally through attachment anxiety and attachment avoidance (Brennan, Clark, & Shaver, 1998). Similarly, this study investigated PSS based upon the delineation of family PSS and friend PSS, as suggested by previous literature to be experienced distinctly in sexual minority men. Additionally, this study was one of the first empirical examinations to determine the inclusion criteria of sexual orientation based upon all three dimensions recommended by the Williams Institute (2009): self-identification, sexual behavior, and sexual attraction. In doing so, sexual orientation was able to be assessed more broadly. This was important given that defining sexual orientation is "arguably the most encompassing difficulty in sexual minority research" (Moradi, Mohr, Worthington, & Fassinger, 2009, p. 5) due to the current movement of sexual minorities characterizing their sexual orientation in non-categorical terms. This was evident by sexual minority men in this sample who reported unique combinations of self-identification, sexual behavior, and sexual attraction.

Efforts to recruit a diverse sample. Given that this study controlled for education level, age, and birth sex, numerous efforts were made to diversify the sample in other areas.

Specifically, efforts were made to recruit for and obtain a more diverse sample in terms of ethnicity, race, geographic region, and degree of sexual orientation outness. First, this study assessed ethnicity and race separately through the demographic questionnaire, and included many "please specify" and "other" options, allowing for greater autonomy to self-identify. Additionally, the Williams Institute (2009) reported that ethnic and racial minorities are more likely to admit to same-sex behavior and attraction, and are more likely to self-identify as "same gender loving" and "man loving man" as compared to "gay" or "bisexual" which are more likely to be endorsed by non-Hispanic/Latino Caucasian men. Consistent with the Williams Institute, Deblaere, Brewster, Sarkeees, and Moradi (2010) suggest that assessing sexual orientation among ethnic and racial minorities in a more fluid, non-categorical manner could increase participation. As a result, sexual orientation was assessed through the dimensions of self-identification (with "Same Gender Loving/Man Loving Man" as an option), sexual behavior, and sexual attraction. Additionally, the director of the LGBTA center at the Pennsylvania State University made direct requests to her LGBTA center director colleagues at institutions with a higher proportion of ethnic and racial minorities to forward the recruitment notice for this study.

Second, this study attempted to diversify the sample geographically by recruiting at institutions of higher education throughout all geographic regions and population areas (e.g., rural, suburban, urban/city) within the United States by using the national listserv for the Consortium of Higher Education LGBTA Resource Professionals. This was important given that sexual minorities from different geographic regions and population areas may be exposed to varying degrees and types of heterosexist messages (Szymanski, Kashubeck-West, & Meyer, 2008a).

Third, an attempt was made to recruit a wider range of sexual orientation outness by

encouraging participants to forward the recruitment notice to those who they perceived to be less out or open regarding their sexual orientation. Efforts to recruit sexual minority individuals who are less out is important given that these individuals are more difficult to sample, and therefore, are more marginalized in the scientific literature (Moradi, Mohr, Worthington, & Fassinger, 2009).

Despite the aforementioned efforts, the sample from this study was disproportionately non-Hispanic/Latino (91.9%), Caucasian (83.9%), and largely from the New England, Mid-Atlantic, and Great Lakes regions of the United States. This highlights that obtaining ethnic, racial and geographic diversity is one of the greatest difficulties currently facing sexual minority researchers (Deblaere, Brewster, Sarkeees, & Moradi, 2010; Moradi, Mohr, Worthington, & Fassinger, 2009; Syzmanski, Kashubeck-West, & Meyer, 2008b). Additionally, it is difficult to know whether the efforts taken in this study to recruit a more closeted sample were successful, as no known studies have used the full-scale OI (Mohr & Fassinger, 2000) exclusively with a sample of sexual minority college men.

Limitations

This subsection discusses the limitations of this study. Specifically, issues associated with the sample size, generalizability and sample bias, and data type and study design are presented.

Sample size. An a priori power analysis demonstrated that a sample of 124 participants could detect a medium effect of .125, but not a small effect (i.e., .1; Cohen & Cohen, 1983). If the sample size was larger, several of the non-significant findings previously discussed may have been significant. For example, family PSS was as significant predictor of IH when attachment avoidance was held constant (t = -2.003, p = .047) but did not mediate the relation, as documented through a Sobel test (t = 1.80, SE = .42, p = .07). Similarly, family PSS was not a

significant predictor of IH when attachment anxiety was held constant (t = -1.899, p = .06). With a larger sample size, family PSS may have significantly mediated the relation between attachment avoidance and IH, and/or attachment anxiety and IH thereby providing further evidence for a distinction between family PSS and friend PSS.

Generalizability and sample bias. Despite efforts to recruit individuals with a minority ethnic and/or racial identity, the sample was primarily non-Hispanic and Caucasian, thus limiting the generalizability of the findings to these groups of sexual minority college men. Additionally, the sample included men with a wide range of sexual orientation identity, based upon self-identification, sexual behavior, and sexual attraction. Given that sexual orientation is a unique and complex identity construct, these findings should not be indiscriminately applied to all sexual minority college men. Moreover, several issues related to sample bias were present in this study, limiting the generalizability of these results. First, random sampling did not occur. Rather, only individuals that registered their email addresses with the LGBTA centers on their college campuses were recruited. Further, these individuals only received the recruitment notice if the director of their respective centers decided to forward along the recruitment email. As a result, this limited the sample to participants that (a) had LGBTA centers on their college campuses which where affiliated with the Consortium of Higher Education LGBTA Resource Professionals, (b) were registered with their respective LGBTA centers, and (c) had a director who decided to forward along the recruitment notice. Therefore, many sexual minority college men were unable to participate such as those who attended institutions without LGBTA centers (e.g., religious institutions) and those who were not active or participating members of their LGBTA centers. Additionally, given their decision to participate, the sample from this study may disproportionately represent sexual minority college men who are more politically active with

sexual minority issues and rights, and/or those who were motivated by the $40 drawing.

Data type and study design. The predominant means of assessing attachment, PSS, IH, and sexual orientation outness in the field of counseling psychology has been through self-report surveys that are inherently vulnerable to bias (Howard, 1994). As such, the results from this study are based upon a certain degree of error that is unable to be determined or localized. Additionally, although mediation assumes causality, the Baron and Kenny (1986) method of multiple regression is unable to detect causal pathways, thereby limiting the interpretive ability of these findings. Given the cross-sectional nature of this study, and many like it in the literature, future research is needed which examines IH longitudinally and experimentally in order to determine what causes IH, and how it develops and changes over time.

Implications for Theory

Minority stress theory. Individuals who have one or more minority identities experience unique stressors that are not felt by those in majority groups (Meyer, 1995; 2003). Participants in this sample all experienced at least one minority identity, that of being a gay or bisexual. A particularly interesting finding from this study was that 10.2% of the variance in IH was accounted for by the interaction between the variables of sexual orientation outness, attachment anxiety, attachment avoidance, family PSS, and friend PSS. One possible explanation for this finding was that the gay and bisexual men in this sample may have had additional minority identities that were uniquely influenced by the aforementioned variables. Abes, Jones, and McEwen (2007) argue that the intersection of multiple identities within each individual should be considered, as this impacts not only one's experience, but also, identity development. When utilizing minority stress theory as a framework for future research, it is important to consider the intersection of all of the unique minority identities participants may have, especially within a

college sample, given that identity is the cornerstone of this developmental stage (i.e., identity vs. confusion; Erikson, 1959).

Attachment theory. Findings from this study documented that although attachment anxiety and attachment avoidance were significant predictors of IH, they accounted for only a small percentage of the variance. As a result, it would appear that attachment may not play a large role in the variation of experiences of gay and bisexual men. However, based upon post-hoc analyses as previously discussed in this chapter, it appears that attachment avoidance may serve as protective factor against the negative messages that are perpetrated against sexual minorities. This is important to highlight, given that experiencing high attachment avoidance has been largely characterized as a negative experience (Mikulincer & Shaver, 2007). If additional research documents that attachment avoidance serves to protect minorities from negative societal and interpersonal messages, then the current parameters of attachment theory may be expanded.

Implications for Future Research

As just mentioned, more research is needed in order to determine why IH levels vary in sexual minority men. Specifically, this subsection discusses how future research can account for the limitations and challenges of this study. Also, specific ideas for future research studies are offered.

Accounting for the limitations and challenges of this study. Future research in this area of study would benefit from samples that could detect small effects and which are generalizable to ethnic and racial minorities. It is also important for future research to assess sexual orientation based upon its current conceptualization as a fluid, non-categorical construct. Specifically, utilizing the three dimension of sexual orientation (e.g., self-identification, sexual behavior, sexual attraction) as developed by the Williams Institute (2009) could be helpful.

Special emphasis may be warranted in focusing on the dimension of sexual attraction, given that this was the only dimension in this sample that was significantly related to sexual orientation outness, and IH. However, more studies are needed to better understand how each of these three dimensions of sexual orientation are related with other constructs. Also, given that self-report surveys are the predominant means for assessing constructs in counseling psychology research, it is important for future research to use measures that are psychometrically valid and reliable, and which are based upon current conceptualizations. Furthermore, research designs which are able to detect causal factors of IH, and how IH changes and develops over time would add critical knowledge to the emerging field of research that has just begun to examine why IH levels vary between sexual minority men.

Additionally, one of the major challenges of this study was obtaining a large sample of sexual minority men who completed the entire survey. This was initially surprising given that on average, the survey took less than 10 minutes to complete, and an incentive valued at $40 for every 50 participants was offered. Given this challenge, it appears that those conducting research with sexual minority college students must develop creative strategies and provide attractive incentives in order to recruit a large sample. In speculating about this difficulty, one plausible explanation is that the current generation of sexual minority college students may experience less urgency to advance this area of research given that they are the recipients of increased privilege and acceptance (Rostosky, Riggle, Horne, & Miller, 2009; Syzmanski, Kashubeck-West, & Meyer, 2008a) as compared to previous generations (e.g., the commonplace of LGBTA centers on college campuses in recent years; the recent repeal of "Don't Ask Don't Tell;" the increase in the number of states legalizing gay marriage). A second plausible explanation for the difficulty of recruiting a large sample of sexual minority college students is the ever-evolving nature in

which individuals communicate and retrieve information. Specifically, this study recruited solely through email, failing to take advantage of the ever-more popular and ubiquitous communication networks of Facebook and Twitter.

Future Investigations. Based upon the limited research that has examined influencing factors of IH, and the results and the limitations from this study, numerous research directions emerge. First, it is important to continue the investigation of why IH levels vary in different sexual minority populations. Specifically, it is important to examine how IH develops and changes over time in sexual minority women, as it should not be assumed that IH is experienced similarly between sexual minority men and women (Syzmanski, Kashubeck-West, & Meyer, 2008a). The current sample was limited to sexual minority men for two reasons: (a) to account for birth sex as a potentially confounding variable, and because (b) IH measures have been developed and normed on either sexual minority men or women, but not both. Investigating why IH levels vary between sexual minority women could not only provide a better understanding of this phenomenon in women, but also, would allow for a comparison with sexual minority men. Also, additional research could focus on sexual minorities who receive less than a college education. This could be an important area of investigation given that being enrolled in college is likely to afford opportunities to explore one's sexual orientation more deeply, and express oneself in ways that may not be as accessible if not surrounded by similar others in an educational environment. Future studies that examine IH levels across education levels could yield interesting findings into the variability of IH levels between sexual minorities.

Second, it is important to conduct further examination of the predictor variables of IH. Specifically, although sexual orientation outness accounted for a large proportion of the variance in IH levels in sexual minority men, the causal pathway of this relation is not clear. Additional

research is needed which examines whether the process of coming out causes less IH, or if experiencing less IH helps to facilitate the coming out process. Also, given that attachment anxiety, attachment avoidance, family PSS, and friend PSS were not found to account for a large proportion of the variance in IH levels, and that limited research exists which has examined why IH varies in sexual minority men, a qualitative examination seems appropriate. A grounded-theory approach (Glaser & Strauss, 1967) could be useful in interviewing sexual minority men in order to develop a theory as to how these men experience negative heterosexist messages, and come to subsequently internalize them. This type of investigation could yield meaningful insight into the factors that may play a role in IH levels. If such factors were found, a longitudinal study could be conducted which examined their ability to predict IH over time. In conducting this type of study, researchers may benefit from paying attention to the role of self-esteem, as Szymanski (2009) found that self-esteem significantly moderated the relation between heterosexist events and psychological distress in a sample of sexual minority men.

By conducting studies with sexual minority women and those with less than a college education, and by further examining potential predictors of IH longitudinally based upon qualitative investigations, a better understanding of why IH levels vary between sexual minorities may emerge. The ability to obtain this information is crucial to reducing high IH levels that are associated with poor psychological health and unsatisfying relationships in sexual minorities. It is also important to highlight that similar studies are also needed which examine why individuals with a wide range of concealable stigmas experience varying degrees of internalized shame.

Implications for Practice

Based upon the findings from this study, and what was learned through the process of recruitment, several important implications for counseling psychologists emerge. First, post-hoc analyses documented that sexual orientation outness is an important area to discuss with sexual minority men. Second, the manner in which sexual minority college students define themselves is important to recognize when working with this population.

Exploring the coming out process. Two of the most interesting findings from this study came from the post-hoc analyses that examined sexual orientation outness. First, sexual orientation outness accounted for a significant proportion of the variance in IH, suggesting that sexual orientation outness is a major influencing factor in the variation of IH levels in sexual minority men. Second, sexual orientation outness significantly mediated the relation between attachment avoidance and IH, suggesting that attachment avoidance may serve as a protective mechanism for gay and bisexual men, allowing them to be increasingly out.

Collectively, these findings suggest that it is important to discuss sexual minority identity development and the stages of coming out with sexual minority men. Specifically, Fassinger and Miller (1997) offer an inclusive model of sexual minority identity development which delineates development by individual sexual identity and group membership identity. The phases for each identity development progress through stages of non-awareness, awareness, exploration, deepening/commitment, and internalization/synthesis. Additionally, Cass (1984), Corrigan and Matthews (2003), and Rosario, Hunter, Maguen, Gwadz, and Smith (2001) offer various approaches and models of coming out. Utilizing models of sexual minority identity development and coming out can assist therapists in helping sexual minority men to explore their identity, and help them to evaluate if, when, to whom, and for what purpose coming out to various individuals

and groups is appropriate.

It is also important to highlight that the concealable stigma aspect of sexual orientation can serve as a protective mechanism to shield sexual minorities from overt discrimination and hatred. Therefore, the findings from this study do not suggest that sexual minority men should come out indiscriminately regardless of the person, group, or circumstance (Levitt et al., 2009). Rather, a thoughtful exploration and evaluation of the potential risks and benefits of coming out can be helpful in guiding sexual minority men to take steps to both protect themselves, and identify and advance their sexual orientation identity development (Frost & Meyer, 2009).

Defining and characterizing sexual orientation. Another interesting discovery from this study was uncovered during the recruitment process. In examining the data prior to cleaning procedures, a significant proportion (approximately 20%) of the individuals that participated in this study did not meet the explicitly stated inclusion criteria of being a "self-identified gay male," but rather, identified their birth sex as "female," and/or self-identified their sexual orientation as "lesbian," "bisexual," and "other." Although surprising, this is consistent with previous literature that suggests that the term "gay" has become a generic term in recent years to represent all sexual minorities, whereas its previously characterized men who had romantic same-sex relationships (Moradi, Mohr, Worthington, & Fassinger, 2009). Additionally, the current movement within the sexual minority community is to define sexual orientation (as well as gender identity) as a fluid, evolving identity construct, in which categorical labels (e.g., "gay," "bisexual") are becoming increasingly antiquated and less endorsed (Moradi, Mohr, Worthington, & Fassinger, 2009). Given this trend, it will be interesting to discover if the sexual orientation identities of "bisexual" and "questioning," which are characterized by their fluidity, become more or less salient in the coming decade due to their categorical labels.

As a result of this discovery, the inclusion criteria of sexual orientation for this study was changed from self-identified gay males to sexual minority males, based upon the three dimensions of sexual orientation that have been offered by the Williams Institute (2009): self-identification, sexual behavior, and sexual attraction. In retrospect, although initially intended to be used for descriptive purposes only, it was critical that all three dimensions of sexual orientation was assessed, as this allowed for the inclusion of a wide-range of sexual orientation as defined by college students themselves. Additionally, the drafts of this manuscript prior to data collection referred to individuals with any non-heterosexual orientation as members of the "LGB" or lesbian, gay, and bisexual community. This was based upon the fact that college centers that provide support for this population are commonly referred to LGBTA (i.e., lesbian, gay, bisexual, transgendered, and ally) centers. However, based upon what was learned through the recruiting process for this study, it became apparent that the term LGB inherently creates a forced choice for sexual minorities to endorse a sexual orientation label to which they may not fit. Therefore, the language in this final manuscript refers to this population as "sexual minorities," reflecting the non-privileged, yet fluid trend by which this group currently characterizes themselves.

Clinicians working with sexual minority individuals are encouraged to allow their clients to define, identify, and/or characterize their sexual orientation and experiences themselves in their own words. For some clients, discussing their sexual orientation in this way may take time, and be a process that fosters personal growth and exploration. Clinicians may be able to facilitate this process by suggesting discussing sexual orientation through the dimensions of self-identification, sexual behavior, and sexual attraction. Special consideration of sexual attraction may be especially warranted given that a report by the Williams Institute (2009) suggests that

this dimension most accurately represents one's true orientation, as the dimensions of self-identification and sexual behavior are more heavily influenced by external factors. This argument is supported by a post-hoc analysis in this study which documented that sexual attraction was the only dimension of sexual orientation that was significantly related to sexual orientation outness and IH.

By focusing all three dimensions of sexual orientation, clinicians can avoid forcing their clients into a pre-determined sexual orientation category to which they may not fit. Discussing and exploring sexual orientation in this manner could be utilized not only in therapy, but through intake procedures, and through research that is conducted within university counseling centers. This approach not only expresses respect for the uniqueness of each individual client, but is consistent with the current culture by which sexual minority college students characterize their sexual orientation.

Conclusion

Individuals living with concealable stigmas (e.g., minority sexual orientation, Tourette's Syndrome, Herpes, having a prosthetic limb, having been previously incarcerated) experience unique stressors that result from society and its members perpetrating negative messages (Meyer, 1995, 2003). These messages are centered on the viewpoint that these individuals are defective, incapable, bad, immoral, and/or "less than" in some way. Subsequently, individuals with concealable stigmas internalize these negative messages and develop feelings of shame and self-hatred (Szymanski, Kashubeck-West, & Meyer, 2008a). Individuals with concealable stigmas may choose to keep this aspect of themselves hidden from others as a means of protecting against harassment and discrimination, although doing so may increase psychological distress and incongruence (Pachankis, 2007). It is important to highlight that although individuals with

concealable stigmas experience a certain degree of internalized shame, this varies between individuals, although this is not well understood (Quinn, 2006).

This study focused on one type of concealable stigma, a minority sexual orientation in men. Results indicated that among sexual minority men, levels of internalized shame (i.e., internalized heterosexism) did vary and was influenced by the combination of one's level of outness, amount of perceived social support, and levels of attachment anxiety and avoidance. Further, these findings indicate that high attachment avoidance may serve as a protective factor against heterosexist messages.

Similar studies are needed which examine why levels of internalized shame vary among individuals with a wide range of concealable stigmas. In conducting such studies, it will be important to investigate whether attachment avoidance serves as a protective factor against negative messages, and whether engaging in the process of coming out can help to reduce internalized shame among those with other concealable stigmas. Given the lack of research in this area, it is unclear whether the findings from this study are generalizable to other groups given the wide range of variation between concealable stigmas and their associated experiences. Further study is warranted in these areas, given that higher levels of internalized shame are associated with poorer psychological health (Syzmanski, Kashubeck-West, & Meyer, 2008b). Such information could equip clinicians in helping individuals with concealable stigmas live healthier and more meaningful lives.

Appendix A

Recruitment Notice

Seeking . . . "A Few Good Men"

I am conducting a research study to learn about the factors that influence how gay men feel about themselves.

I am seeking voluntary participants who are male, self-identify as gay, and who are between the ages of 18 and 25 years.

This is an online survey that will take about 10 minutes to complete.

No self-identifying information will be asked, and your decision to participate as well as your responses will be kept private, and confidential.

To participate, click on the web link!

https://www.psychdata.com/s.asp?SID=140115

As thanks for your participation, you will be given the opportunity at the end of the survey to enter a raffle. For every 50 participants, one individual will be randomly selected to receive his choice of a Rainbow Pride Flag (valued at $40) or a $40 Starbucks giftcard.

If you know other males who may be less open or out regarding their sexual orientation, I am greatly interested in receiving their input – please forward this information to them!

This research study has received an exemption determination by the Office of Research Protections at The Pennsylvania State University.

This research study is being conducted by Mark Patishnock who is a doctoral student at the Pennsylvania State University, and is being supervised by Dr. Kathleen Bieschke, who is a faculty member in the department of Counselor Education, Counseling Psychology, and Rehabilitation Services at the Pennsylvania State University. Should you have any questions or concerns, please feel free to contact her at kxb11@psu.edu or myself at mfp126@psu.edu

Sincerely,

Mark F. Patishnock, M.A.
Doctoral student, Counseling Psychology
The Pennsylvania State University

Appendix B

Recruitment Email Scripts

Initial Email to be sent to the listserv of Consortium directors

Email Title: Request to Forward Research Study

Email body:

Dear fellow directors,

A doctoral student I have been working with is hoping to complete his research study at the Pennsylvania State University, and is seeking to recruit your male students who self-identify as gay. The study is on-line, should take approximately 10 minutes to complete, and participants may enter a raffle for either a $40 Starbucks gift card, or a Rainbow Pride Flag (valued at $40).

This research study has received an exemption determination by the Office of Research Protections at The Pennsylvania State University.

I am requesting that you forward this recruitment email to your listserv of students registered within your LGBTA center. In an attempt to make this request as easy as possible on your end, I have already constructed a message below on your behalf. Simply, delete all text above the dotted line before forwarding this email to your students.

Thank you so much for your help,
Warmly,

Allison Subasic
Director, LGBTA Student Resource Center
The Pennsylvania State University

----------*Delete above Text before Forwarding to Your Student Listserv*----------

Dear students,

I would like to invite you to participate in a research study that is being conducted by a doctoral student at the Pennsylvania State University. Participation is voluntary, consists of an online survey, and should take approximately 10 minutes to complete. As a participant, you will be eligible to enter a raffle in which you may be selected to receive your choice of either a $40 Starbucks giftcard or a Rainbow Pride Flag ($40 value). Please see below for more information. You can click on the web link to learn more about the study, and to participate if you'd like.

I hope you will consider participating,

Warmly,

Second Email to be sent to the listserv of Consortium directors (Two Weeks after Initial):

Email Title: Follow-up Request to Forward Research Study

Email body:

Dear fellow directors,

Two weeks ago, I sent you a request to forward the below recruitment notice to the email listerv of students registered within your LGBTA centers. I am asking that you forward this recruitment email again (or initially, if you had considered sending it, but had not yet had the chance to do so). This research study is being conducted by a doctoral student at the Pennsylvania State University. Your help would be greatly appreciated!

This research study has received an exemption determination by the Office of Research Protections at The Pennsylvania State University.

In an attempt to make this request as easy as possible on your end, I have already constructed a message below on your behalf. Simply, delete all text above the dotted line before forwarding this email to your students.

Thank you so much for your help,
Warmly,

Allison Subasic
Director, LGBTA Student Resource Center
The Pennsylvania State University

----------Delete above Text before Forwarding to Your Student Listserv----------

Dear students,

I would like to invite you to participate in a research study that is being conducted by a doctoral student at the Pennsylvania State University. Participation is voluntary, consists of an online survey, and should take approximately 10 minutes to complete. As a participant, you will be eligible to enter a raffle in which you may be selected to receive your choice of either a $40 Starbucks giftcard or a Rainbow Pride Flag ($40 value). Please see below for more information. You can click on the web link to learn more about the study, and to participate if you'd like.

I hope you will consider participating if you have not done so already,

Warmly,

Third Email to be sent to the listserv of Consortium directors (Four Weeks after Initial):

Email Title: Final Request to Forward Research Study

Email body:

Dear fellow directors,

Four weeks ago, and then again, two weeks ago, I sent you a request to forward the below recruitment notice to the email listerv of students registered within your LGBTA centers. I am asking that you forward this recruitment email again, for a final time (or initially, if you had considered sending it, but had not yet had the chance to do so). This research is being conducted by a doctoral student at the Pennsylvania State University. Thank you so much for your efforts!

This research study has received an exemption determination by the Office of Research Protections at The Pennsylvania State University.

In an attempt to make this request as easy as possible on your end, I have already constructed a message below on your behalf. Simply, delete all text above the dotted line before forwarding this email to your students.

Thank you so much for your help,
Warmly,

Allison Subasic
Director, LGBTA Student Resource Center
The Pennsylvania State University

----------*Delete above Text before Forwarding to Your Student Listserv*----------

Dear students,

I would like to invite you to participate in a research study that is being conducted by a doctoral student at the Pennsylvania State University. Participation is voluntary, consists of an online survey, and should take approximately 10 minutes to complete. As a participant, you will be eligible to enter a raffle in which you may be selected to receive your choice of either a $40 Starbucks giftcard or a Rainbow Pride Flag ($40 value). Please see below for more information. You can click on the web link to learn more about the study, and to participate if you'd like.

I hope you will consider participating if you have not done so already,

Warmly,

Appendix C

Informed Consent Form

Informed Consent Form for Social Science Research

The Pennsylvania State University

Title of Project: Social Support and its Influence on Gay Male College Students

Principal Investigator: Mark F. Patishnock, M.A., Doctoral Student
Department of Counselor Education, Counseling Psychology, and Rehabilitation Services
Pennsylvania State University
327 CEDAR Building, University Park, PA 16802
mfp126@psu.edu

Advisor: Kathleen Bieschke, Ph.D., Professor
Department of Counselor Education, Counseling Psychology, and Rehabilitation Services
Pennsylvania State University
306 CEDAR Building, University Park, PA 16802
814-865-3296; kbieschke@psu.edu

Purpose of the Study: The purpose of this research study is to examine factors that influence how gay men feel about themselves. This will help us to learn more about how counselors may be able to help gay men develop greater self acceptance.

Procedures to be followed: You will be asked questions through an online survey, including a demographic questionnaire, which will only be used for descriptive purposes. Your name will not be asked.

Benefits: You may be able to reflect on your relationships with others, and how you view others in your life. For some participants, such an experience may be meaningful. By examining factors that may influence how you feel about yourself, this research will provide information that can help counselors help gay men develop greater self acceptance.

Duration: It will take approximately 10 minutes to complete the survey.

Statement of Confidentiality: Your participation in this research is confidential. In the event of any publication or presentation resulting from the research, no personally identifiable information will be shared because your name is in no way linked to your responses.

Your confidentiality will be kept to the degree permitted by the technology being used. No guarantees can be made regarding the interception of data sent via the Internet by any third parties. However, this study will use www.psychdata.net online survey system to collect and

store data. This system is a professionally developed server and many studies have used it. All of the participant responses will be encrypted using 128 bit SSL technology (Secure Socket Layer), which is equivalent to the industry standard for securely transmitting credit card information over the internet. Once research data is stored on the psychdata server, it will be held in an isolated database that can only be accessed by a principal investigator.

Right to Ask Questions: Please contact Mark F. Patishnock, M.A. by emailing mfp126@psu.edu with questions, complaints, or concerns about this research.

Voluntary Participation: Your decision to participate in this study is voluntary. You may choose to not participate, answer certain questions, withdraw your consent, and/or discontinue your participation in the study at any time without penalty.

Payment for participation: At the end of the survey, you will be provided with the opportunity to participate in a drawing. For every 50 participants, one individual will be randomly selected to receive his choice of either an LGB rainbow pride flag (valued at $40) or a $40 Starbucks giftcard. In order to participate in the drawing, you will be asked to submit an email address so that you can be contacted in the event that you are selected. Your email address will be stored separately from your survey responses.

You must be 18 years of age or older to consent to take part in this research study. If you are 17 years old or younger, please disregard this letter.

If you have read the information in this form and are willing to participate in the research, please press the continue button and follow instructions for participating in a confidential online survey.

Completion and submission of the survey is considered your implied consent to participate in this study. Please print this form for your records.

Appendix D

Demographic Questionnaire

Please provide the following demographic information. This information will only be used to describe the sample.

1. **What is your age:_____**

2. **Are you currently enrolled at an institution of higher education (e.g., college, university, technical school)?***
   (a) Yes [if selected, participant is directed to question #3]
   (b) No [if selected, participant is directed to question #4]

3. **What is the name of your school (e.g., Penn State University)? This information will be kept confidential_____**

4. **What is your birth sex?**
   (a) Male
   (b) Female
   (c) Intersex
   (d) Other (please specify):_____

5. **What is your current gender identity?**
   (a) Man [if selected, participant is directed to question #7]
   (b) Woman [if selected, participant is directed to question #7]
   (c) Transgender [if selected, participant is directed to question #6]
   (d) Other (please specify):_____[if selected, participant is directed to question #7]

6. **Please describe your current transgender identity (e.g., Female to Male)_____**

7. **What term best describes your sexual identity?**
   (a) Gay
   (b) Same Gender Loving/Man Loving Man
   (b) Bisexual
   (c) Heterosexual
   (d) Other (please specify):_____

8. In the past year, with whom have you had sex?

(a) Men only
(b) Women only
(c) Both men and women
(d) I have not had sex in the past year
(e) Other (please specify):_____

9. People are different in their sexual attraction to other people. Which best describes your feelings?

(a) Only attracted to males
(b) Mostly attracted to males
(c) Equally attracted to males and females
(d) Mostly attracted to females
(e) Only attracted to females
(f) Not sure
(g) Other (please specify):_____

10. Does your university's non-discrimination statement include sexual orientation?

(a) Yes
(b) No
(c) Not Sure

11. Do you identify as Hispanic or Latino(a)?

(a) Yes [if selected, participant is directed to question #12]
(b) No [if selected, participant is directed to question #13]

12. What Nationality do you identify as the origin of your Hispanic or Latino(a) ethnicity?

(a) Puerto Rican
(b) Cuban/Cuban American
(c) Dominican (Republic)
(d) Mexican
(e) Mexican American
(f) Central or South American
(g) Don't Know
(h) Other (please specify):_____

13. What is your primary Race?

(a) African
(b) African American/Black
(c) Alaskan Native (please specify corporation): _____
(d) Asian (please specify): _____
(e) Asian American
(f) Southeast Asian (please specify):_____
(g) South Asian (please specify): _____
(h) Caribbean/West Indian (please specify): _____
(i) Caucasian/White
(l) Middle Eastern (please specify): _____
(m) Native American Indian (please specify Tribal affiliations): _____
(n) Pacific Islander/Hawaiian Native
(o) I identify as having TWO or more primary races (please list all of your primary racial identities):_____
(p) Other (please specify):_____

14. **For your 1st parent/legal guardian, what is his/her highest level of education?**

(a) No High School
(b) Some High School
(c) High School Diploma/GED
(d) Some College
(e) Business/Technical Certificate/Degree
(f) Associates Degree
(g) Bachelors Degree
(h) Some Graduate Work
(i) Masters Degree
(j) Doctoral Degree
(k) Other Professional Degree
(l) Unknown
(m) Not applicable

15. **For your 2nd parent/legal guardian, what is his/her highest level of education?**

(a) No High School
(b) Some High School
(c) High School Diploma/GED
(d) Some College
(e) Business/Technical Certificate/Degree
(f) Associates Degree
(g) Bachelors Degree

(h) Some Graduate Work
(i) Masters Degree
(j) Doctoral Degree
(k) Other Professional Degree
(l) Unknown
(m) Not applicable

16. Please list where you spent most of your childhood (If in the United States, please list state. If outside the United States, please list country):_____

17. In what environment did you grow up?
(a) Farm/ranch
(b) Rural, Non-Farm
(c) Small Town
(d) Suburban
(e) Urban/City
(f) I grew up in multiple types of environments
(g) Other (please specify):_____

Appendix E

Outness Inventory (OI)

Mohr, J. J., & Fassinger, R. E. (2000). Measuring dimensions of lesbian and gay male experience. *Measurement and Evaluation in Counseling and Development*, *33*(2), 66–90.

Please rate each item below on a scale from 1 to 7

1 = person definitely does not know about your sexual orientation status
2 = person might know about your sexual orientation status, but it is never talked about
3 = person probably knows about your sexual orientation status, but it is never talked about
4 = personal probably knows about your sexual orientation status, but it is rarely talked about
5 = person definitely knows about your sexual orientation status, but it is rarely talked about
6 = personal definitely knows about your sexual orientation status, and it is sometimes talked about
7 = person definitely knows about your sexual orientation status, and it is openly talked about

0 = not applicable to your situation; there is no such person or group of people in your life

1. My new straight friends
2. My work peers
3. My work supervisors
4. Strangers
5. Mother
6. Father
7. Siblings
8. Extended family/relatives
9. Members of my religious community (e.g., church, temple)
10. Leaders of my religious community (e.g., minister, rabbi)

Appendix F

Internalized Homonegativity Inventory (IHNI)

Mayfield,W. (2001). The development of an internalized homonegativity inventory for gay men. *Journal of Homosexuality, 41*(2), 53-76.

Please read the following items and rate each on a scale from 1 (strongly disagree) to 6 (strongly agree)

1 2 3 4 5 6

Strongly disagree strongly agree

1. I believe being gay is an important part of me.*
2. I believe it is OK for men to be attracted to other men in an emotional way, but it's not OK for them to have sex with each other.
3. When I think of my homosexuality, I feel depressed.
4. I believe that it is morally wrong for men to have sex with other men.
5. I feel ashamed of my homosexuality.
6. I am thankful for my sexual orientation.*
7. When I think about my attraction towards men, I feel unhappy.
8. I believe that more gay men should be shown in TV shows, movies, and commercials.*
9. I see my homosexuality as a gift.*
10. When people around me talk about homosexuality, I get nervous.
11. I wish I could control my feelings of attraction toward other men.
12. In general, I believe that homosexuality is as fulfilling as heterosexuality.*
13. I am disturbed when people can tell I'm gay.
14. In general, I believe that gay men are more immoral than straight men.
15. Sometimes I get upset when I think about being attracted to men.
16. In my opinion, homosexuality is harmful to the order of society.
17. Sometimes I feel that I might be better off dead than gay.
18. I sometimes resent my sexual orientation.
19. I believe it is morally wrong for men to be attracted to each other.
20. I sometimes feel that my homosexuality is embarrassing.
21. I am proud to be gay.*
22. I believe that public schools should teach that homosexuality is normal.*
23. I believe it is unfair that I am attracted to men instead of women.

* = Reverse Scored (#'s: 1, 6, 8, 9, 12, 21, 22)

Appendix G

Experiences in Close Relationships (ECR) Scale

Brennan, K.A., Clark, C.L., & Shaver, P.R. (1998). Self-report measurement of adult attachment: An integrative overview. In J.A. Simpson & W.S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46-77). New York: Guilford Press.

The following statements concern how you generally feel in close relationships (e.g., with romantic partners, close friends, or family members). Respond to each statement by indicating how much you agree or disagree with it, using the following rating scale:

1	2	3	4	5	6	7
Disagree Strongly	Disagree	Disagree slightly	Neutral/mixed	Agree slightly	Agree	Agree strongly

1. I prefer not to show others how I feel deep down.
2. I worry about being rejected or abandoned.
3. I am very comfortable being close to other people.*
4. I worry a lot about my relationships.
5. Just when somebody starts to get close to me I find myself pulling away.
6. I worry that others won't care about me as much as I care about them.
7. I get uncomfortable when someone wants to be very close to me.
8. I worry a fair amount about losing my close relationship partners.
9. I don't feel comfortable opening up to others.
10. I often wish that close relationship partners' feelings for me were as strong as my feelings for them.
11. I want to get close to others, but I keep pulling back.
12. I want to get close to others, and this sometimes scares them away.
13. I am nervous when another person gets too close to me.
14. I worry about being alone.
15. I feel comfortable sharing my private thoughts and feelings with others.*
16. My desire to be very close sometimes scares people away.
17. I try to avoid getting too close to others.
18. I need a lot of reassurance that close relationship partners really care about me.
19. I find it relatively easy to get close to others.*
20. Sometimes I feel that I try to force others to show more feeling, more commitment to our relationship than they otherwise would.
21. I find it difficult to allow myself to depend on close relationship partners.
22. I do not often worry about being abandoned.*
23. I prefer not to be too close to others.

24. If I can't get a relationship partner to show interest in me, I get upset or angry.
25. I tell my close relationship partners just about everything.*
26. I find that my partners don't want to get as close as I would like.
27. I usually discuss my problems and concerns with close others.*
28. When I don't have close others around, I feel somewhat anxious and insecure.
29. I feel comfortable depending on others.*
30. I get frustrated when my close relationship partners are not around as much as I would like.
31. I don't mind asking close others for comfort, advice, or help.*
32. I get frustrated if relationship partners are not available when I need them.
33. It helps to turn to close others in times of need.*
34. When other people disapprove of me, I feel really bad about myself.
35. I turn to close relationship partners for many things, including comfort and reassurance.*
36. I resent it when my relationship partners spend time away from me.

* = Reverse Scored (#'s: 3, 15, 19, 22, 25, 27, 29, 31, 33, 35)

Note: Attachment Anxiety is measured by even items, and Attachment Avoidance is measured by odd items.

Appendix H

Perceived Social Support Scale (PSSS)

Procidano, M.E., & Heller, K. (1983). Measures of perceived social support from friends and from family: Three validation studies. *American Journal of Community Psychology, 11*(1), 1-24.

The statements which follow refer to feelings and experiences which occur to most people at one time or another in their relationships with friends. For each statement there are three possible answers: Yes, No, Don't know. Please select the answer you choose for each item.

Yes No Don't know

1. My friends give me the moral support I need.
2. Most other people are closer to their friends than I am.*
3. My friends enjoy hearing about what I think.
4. Certain friends come to me when they have problems or need advice.
5. I rely on my friends for emotional support.
6. If I felt that one or more of my friends were upset with me, I'd just keep it to myself.*
7. I feel that I'm on the fringe in my circle of friends.*
8. There is a friend I could go to if I were just feeling down, without feeling funny about it later.
9. My friends and I are very open about what we think about things.
10. My friends are sensitive to my personal needs.
11. My friends come to me for emotional support.
12. My friends are good at helping me solve problems.
13. I have a deep sharing relationship with a number of friends.
14. My friends get good ideas about how to do things or make things from me.
15. When I confide in friends, it makes me feel uncomfortable.*
16. My friends seek me out for companionship.
17. I think that my friends feel that I'm good at helping them solve problems.
18. I don't have a relationship with a friend that is as intimate as other people's relationships with friends.*
19. I've recently gotten a good idea about how to do something from a friend.
20. I wish my friends were much different.*

*= Reverse Scored (#'s: 2, 6, 7, 15, 18, 20)

The statements which follow refer to feelings and experiences which occur to most people at one time or another in their relationships with their families. For each statement there are three possible answers: Yes, No, Don't know. Please select the answer you choose for each item.

Yes No Don't know

1. My family gives me the moral support I need.
2. I get good ideas about how to do things or make things from my family.
3. Most other people are closer to their family than I am.*
4. When I confide in the members of my family who are closest to me, I get the idea that it makes them uncomfortable.*
5. My family enjoys hearing about what I think.
6. Members of my family share many of my interests.
7. Certain members of my family come to me when they have problems or need advice.
8. I rely on my family for emotional support.
9. There is a member of my family I could go to if I were just feeling down, without feeling funny about it later.
10. My family and I are very open about what we think about things.
11. My family is sensitive to my personal needs.
12. Members of my family come to me for emotional support.
13. Members of my family are good at helping me solve problems.
14. I have a deep sharing relationship with a number of members of my family.
15. Members of my family get good ideas about how to do things or make things from me.
16. When I confide in members of my family, it makes me uncomfortable.*
17. Members of my family seek me out for companionship.
18. I think that my family feels that I'm good at helping them solve problems.
19. I don't have a relationship with a member of my family that is as close as other people's relationships with family members.*
20. I wish my family were much different.*

* = Reverse Scored (#'s: 3, 4, 16, 19, 20)

Appendix I

Drawing Winner Email Script

Congratulations!

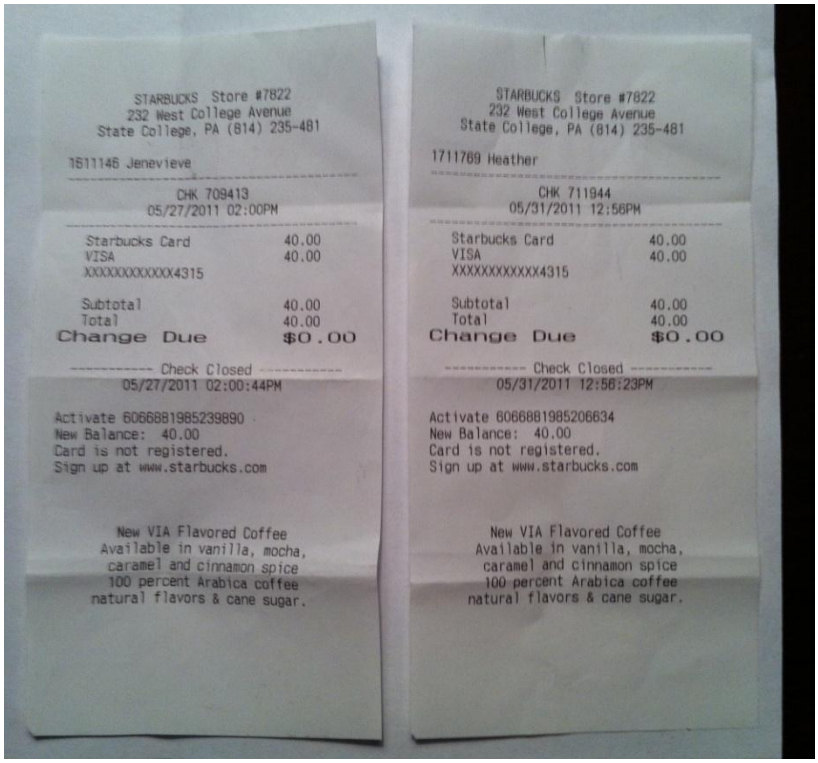
Based upon an online dissertation research study you participated in, you have been randomly selected as a winner of your choice of either a $40 Starbucks giftcard, or a Rainbow Pride Flag (valued at $40). Please indicate your preference, and the mailing address to which you would like your prize sent.

Warm Regards,

Mark Patishnock

Appendix J

Drawing Winner Receipts



STARBUCKS Store #7822
232 West College Avenue
State College, PA (814) 235-481

1611146 Jenevieve

CHK 709413
05/27/2011 02:00PM

Starbucks Card	40.00
VISA	40.00
XXXXXXXXXXXX4315	
Subtotal	40.00
Total	40.00
Change Due	$0.00

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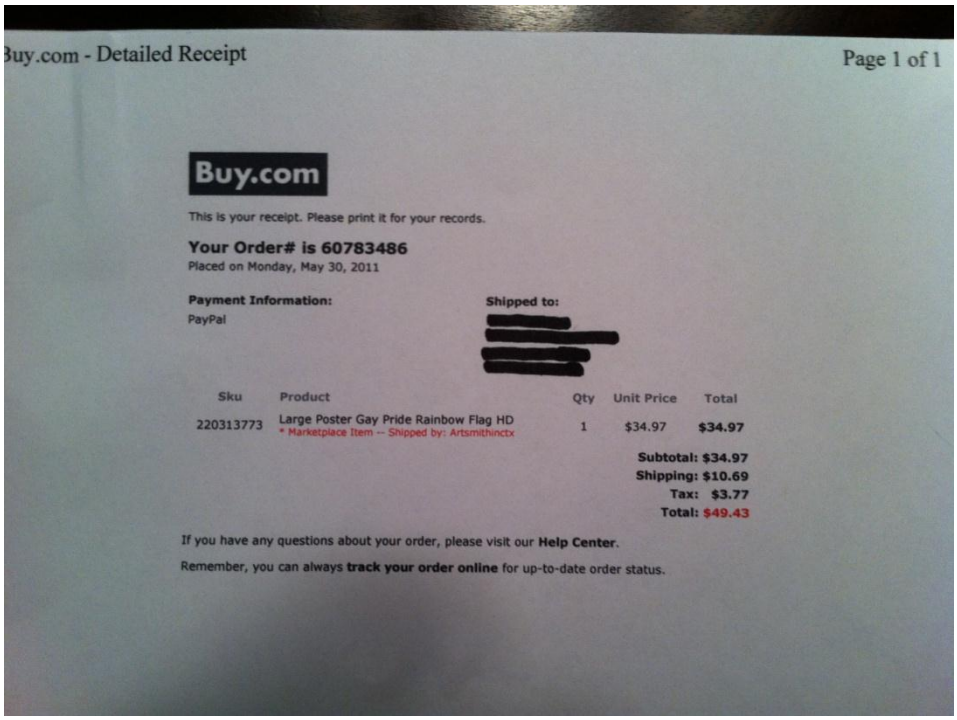

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EDUCATION

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CLINICAL EXPERIENCE

Pre-doctoral Internship — 2011- 2012
Counseling Center, University of Illinois at Urbana-Champaign

Advanced Practicum — Spring 2011
Centre Volunteers in Medicine, State College, PA

Graduate Assistantship — 2010-2011
Counseling and Psychological Services, The Pennsylvania State University

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Counseling and Psychological Services, The Pennsylvania State University	2009 – 2010
Bank of America Career Services, The Pennsylvania State University	Spring 2009
The CEDAR Clinic, The Pennsylvania State University	2008-2009
Family Services Community Mental Health Center, Winston-Salem, NC	2007-2008
Counseling Center, Calvary Baptist Church, Winston-Salem, NC	Spring 2007

OTHER PROFESSIONAL EXPERIENCE

Administrative Supervisor — 2008 -2010
The CEDAR Clinic, The Pennsylvania State University

Community Support Group Leader & Board Member — 2010 - 2011
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ADDITIONAL RESEARCH

Dendy, A. K., Bieschke, K. J., Wix, R. A., **Patishnock, M. F.,** & Brown, E. M. (2010, August). Competence with Lesbian, Gay, and Bisexual Clients: Qualitative Data from Early Career Professionals and Psychology Trainees. Poster accepted for presentation to the annual convention of the American Psychological Association, San Diego, California