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A Study of the Associations Among Homophobia, Empathy, and Mindfulness

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A STUDY OF THE ASSOCIATIONS AMONG HOMOPHOBIA, EMPATHY, AND
MINDFULNESS

A Dissertation

Submitted to the School of Graduate Studies and Research

in Partial Fulfillment of the

Requirements for the Degree

Doctor of Psychology

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August 2014

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The present study examined whether mindfulness or empathy is a better predictor of homophobia. Mindfulness training has been shown to impart a wide range of physical, emotional, and mental health benefits to practitioners, not the least of which is an increase in empathy. Research has also shown that developing empathy is one of the most effective ways to reduce prejudice. This study hypothesized that mindfulness should be at least as effective as empathy in predicting scores on a homophobia measure. Two hundred undergraduate students (159 females and 41 males) from a state university in rural Pennsylvania participated in the present study. Participants completed three measures, the Homophobia Scale (HS), the Interpersonal Reactivity Index (IRI), and the Five Facet Mindfulness Questionnaire (FFMQ) and a demographic survey. A series of linear regressions demonstrated that empathy was a significant predictor of homophobia but mindfulness was not. While this study did not support the hypothesized association between mindfulness and homophobia, the failure to replicate previous research showing that empathy could predict mindfulness suggested that further research in this area, including expanded research designs and alternative measures, may be fruitful. These and other future research implications are discussed.

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I can't wait to start the next chapter of our life.

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CHAPTER ONE

OVERVIEW OF THE PROBLEM

“Homosexuality, despite periods of greater tolerance, has been considered an abomination in the West for much of the past two thousand years” (Bayer, 1981, p. 15). On December 15, 1973, following the civil rights movement of the 1960s, homosexuality was removed from the American Psychiatric Association’s list of mental disorders (Conger, 1975). Nevertheless, despite removal of the stigma of mental illness, homosexuality is still considered deviant by many in American society (Johnson, Brems, & Alford-Keating, 1997). Homophobia, or the prejudice and discrimination based upon sexual orientation, exists on both a societal and individual level within the United States. The prevalent homophobic attitude in modern Western culture has created, and maintains, a social environment that is hostile and stressful for many individuals who identify as gay, lesbian, bisexual, transsexual, or other variations of non-heterosexual orientation (Meyer, 2003). Consequent to the homophobic environment, these individuals are at an elevated risk of developing mental illnesses, substance abuse, suicidal ideation, and deliberate self-harm (King et al., 2008).

If one accepts that homophobia is a problem in Western society, then societal change may help reduce the negative influence on individuals who identify as any variation of non-heterosexual orientation. Considering the range of problems caused by our homophobic society, the prospect of change is daunting. This is especially true given that the problem of homophobia is perpetuated by heterosexist norms that many individuals practice and reinforce on a daily basis, often without their conscious awareness. It would seem, then, that the first step in changing societal norms is raising awareness of the problem.

Mindfulness is a relatively new development in the area of Western medicine and psychology and has the potential to help individuals identify their thoughts and feelings and then choose how to respond to them. Of particular interest to the notion of societal change is a study that demonstrated how mindfulness training could be incorporated into educational systems and raise students' awareness of the social messages conveyed by their teachers, academic materials, and school environment (Orr, 2002). Though not explicitly focused on homophobia, Orr's (2002) study is an example of how mindfulness can provide insight into personal beliefs that are assumed to be common in society (e.g. negative beliefs about homosexuality). Other studies have demonstrated that mindfulness training can reduce prejudice (Batson et al., 1997; Dasgupta & Rivera, 2006; Finlay & Stephan, 2000). These findings suggest that mindfulness training has the potential to increase awareness of social norms (e.g. homophobia) and challenge acceptance of those norms, leading to a reduction in prejudicial thinking.

To date no studies could be found that explicitly examined the connection between mindfulness and homophobia or the potential for using mindfulness-based techniques to reduce homophobia. This lack of literature is not surprising for three reasons. First, the everchanging societal attitudes about gender, sex, orientation, and identity have created a need for a continual refinement of the construct of homophobia and so hinders any attempts to capture the construct in its entirety (Ahmad & Bhugra, 2010; Herek, 2000, 2004; O'Donohue & Caselles, 1993). Second, the scientific study of mindfulness is relatively new and consequently literature on mindfulness was scarce prior to the year 2000 (Williams & Kabat-Zinn, 2011). Third is the issue regarding the practicality of this area of research, given the intuitively contradictory characteristics of individuals who are homophobic and those who practice mindfulness. This third point raises the question of whether meaningful data would be produced if there were a

comparison of these constructs. To address this question, the present study utilized an additional construct, empathy, in an attempt to bridge the theoretical gap between homophobia and mindfulness. Empirical literature has found that empathy has a positive correlation with mindfulness and a negative correlation with homophobia (Atkinson, 2013; Batson et al., 1997; Birnie, Speca, & Carlson, 2010; Finlay & Stephan, 2000; Hayes et al., 2004; Klimecki, Leiberg, Lamm, & Singer, 2012; Krasner, 2009; Langer, Bashner, & Chanowitz, 1985; Lillis & Hayes, 2007). In addition, this study compared empathy and mindfulness on their ability to predict homophobia in an attempt to answer the question of whether mindfulness provides something above and beyond empathy.

CHAPTER TWO
REVIEW OF RELATED LITERATURE

Homophobia

Homophobia is neither a simple term to define nor an easy concept to explain. It is a complex phenomenon that is often defined by the individual attempting to define it. Complicating the problem is that multiple meanings for the term, even within the same study, can call into question the validity of studies attempting to assess and define homophobia. For example, Herek (2000) observed that prejudice in one person could serve to reduce anxiety related to sexuality and gender, yet the same prejudice in another could reinforce the positive view of the self as a member of a dominant social group.

For some, the confusion surrounding the word and the meaning of “homophobia” is seen as a positive thing. Sussal (1998) stated “From my perspective, the term homophobia is useful precisely because it forces recognition of the visceral nature of the phenomenon...” (p. 203). Others perceive the confusion to be detrimental to the goal of understanding the constructs contained within the term homophobia (Ahmad & Bhugra, 2010). In addition, because homophobia can occur on both an individual and institutional level, the meaning can vary depending on which level is being considered (Herek, 1986).

The original definition of homophobia may have been adequate when it was first introduced over 40 years ago, but since then the concept of homophobia has evolved to reflect changes in culture, medicine, and knowledge about homosexuality. Unfortunately, the definition of homophobia has not changed to match the evolving concept behind the term. The following section will deconstruct homophobia as a term and examine the various ways it has been

represented in the empirical literature since its introduction to the scientific community in the 1970s.

Clarification of Terminology

Before considering the definition or construct of homophobia, a brief explanation on the choice to retain the term “homophobia” is necessary. In 2004, Herek stated “it is now time for researchers and theorists to move beyond homophobia” (p. 20). Herek’s call has been met by many researchers who have published scholarly works within the past decade. There appears to be a trend in the empirical literature, especially literature published in mid-2000 and later, towards identifying and utilizing more specific interpretations of the term homophobia, such as Herek’s division of the term into *sexual stigma*, *heterosexism*, and *sexual prejudice* (Herek, 2004; Parrott, Adams, & Zeichner, 2002; Snively, Stretch, & Chadha, 2004). However, much of the empirical literature discussed in this study, including measurement development and validation, use the umbrella term “homophobia.” Consequently, the choice was made to retain the term homophobia despite its numerous limitations which are presented in the next section.

The Term “Homophobia”

The term “homophobia” was introduced in George Weinberg’s *Society and the Healthy Homosexual*, which was published in 1972. Weinberg originally defined it as “the dread of being in close quarters with homosexuals – and in the case of homosexuals themselves, self-loathing” (Herek, 2000, p. 8). This definition developed out of Weinberg’s reflections on the strong, negative, and personal reactions many psychiatrists displayed when around individuals who identified as homosexual in nonclinical settings (Herek, 2004).

It is worthwhile to note that the word homophobia can be confusing from an etymological perspective. The prefix *homo-* can mean either “man” in Latin or “sameness” in Greek. In

Latin, then, homophobia could mean “fear of man” (where “man” represents humankind) or it could mean “fear of males.” The Greek meaning of homophobia means “fear of sameness” or “fear of the similar.” The Greek interpretation of the term homophobia is the most frequently used definition as it applies to fear of both male and female homosexuals (Herek, 2004).

Another way that the word homophobia can be confusing is through the interpretation of the “phobia” suffix. When Weinberg coined the term homophobia, the American Psychiatric Association (APA) defined a phobia as an intense fear response to a particular object or category of objects that the patient recognizes as irrational (American Psychiatric Association, 1980). Although Weinberg stated that he did not intend for homophobia to represent a diagnostic category (Herek, 2004), the term continues to be interpreted by some as suggesting a clinical diagnosis (Briener, 2003; NARTH, n.d.).

The meaning of homophobia can vary as individuals enter different stages of development in their lives. Plummer (2001) conducted surveys of youth in Australia and examined when homophobic language entered into their repertoire. In analyzing these data, Plummer identified five main classes of meaning of homophobia experienced by young people. The first class includes childish behavior, crying, and delays in reaching physical maturity. The second class is group conformity, where the types of groups a person belong to (solo sports versus team sports) and the degree of group membership determine the risk of receiving homophobic labels. The third class involves the degree of strength, aggressiveness, and bravery of the child. The fourth class is based upon a boy’s relationship with a girl. In early years, if a boy spends too much time with girls, or in his later years, not enough time with girls, he is at risk of receiving homophobic labels. The last class involves displays of heterosexism, such as

making comments about women's bodies or aggressing against individuals perceived to be homosexual men (Plummer, 2001).

In what could be considered an attempt to define homophobia by the attitudes it entailed, Bhugra (1987/2010) conducted a review of empirical literature on homophobia with a special focus on a list of attitudes presented in an earlier study by Dressler in 1979. Dressler's study examined the beliefs and attitudes of law students and from those data generated a list of 13 stereotyped beliefs about individuals who identify as homosexual (Dressler, 1979). In Bhugra's review, empirical literature that supported 9 of Dressler's 13 beliefs was presented and discussed. These nine beliefs, generated by Dressler in 1979 and supported by Bhugra in 1987, are found in Table 1.

Table 1

Dressler's (1979) Assumptions about Homosexuals

Homosexuality is an illness;
Homosexuals frequent professions such as the arts and that male nurses and muscle-builders are usually homosexual;
Homosexuals are transvestites;
Homosexual men and women are unreliable;
All homosexual males are effeminate and lesbians 'mannish';
Homosexual males are promiscuous and, as a result, venereal disease is a greater problem among the homosexual than the heterosexual population;
Legalization of homosexual conduct will cause increased homosexuality;
Homosexual individuals evangelistically recruit others to their sexual preference;
Homosexual males prey on children by seduction and rape.

In 2010, Ahmad and Bhugra revisited the empirical literature on homophobia and generated a new list of commonly held assumptions about homosexuality that are found in Table 2.

Table 2

Ahmad and Bhugra's (2010) Assumptions about Homosexuals

Homosexuals are all knowledgeable and open about sex;
Homosexuals (males particularly) are sexually very active and enjoy sex of all types more readily than heterosexual counterparts;
Homosexuals have more disposable income than heterosexual counterparts and earn well;
Homosexuals are hedonistic and are not weighed down by responsibilities (like their heterosexual counterparts);
It is desirable for heterosexual females to have a 'gay best friend' and they are conversely labeled 'fag hags';
Gay men are (overly) concerned with their physical appearance and are always well groomed, dress well, and stylish;
Civil partnership and gay parenting are ways of homosexuals fitting into society more effectively;
Gay men are funny and cheerful;
Lesbians either wish to look and act like men or are feminine 'lipstick lesbians'.

A comparison of the lists of stereotypes indicates an increase between 1987 and 2010 in the understanding of what homosexuality is and is not as well as a reduction in negative beliefs about people who identify as homosexual. Several of the items on the 2010 list, such as "*Homosexuals are all knowledgeable and open about sex*" and "*Homosexuals have more disposable income than heterosexual counterparts and earn well*" suggest positive views of the stereotypical homosexual lifestyle. Increased visibility and integration of individuals who identify as homosexual into mainstream society can bring about many benefits for individuals who are homosexual, yet runs the risk of creating new stereotypes about homosexuality. These new stereotypes have the potential to be harmful to people who identify as homosexual but do not meet the positive expectations held by heterosexual individual (Ahmad & Bhugra, 2010). Supporting this concern, Czopp (2008) found that targets of positive stereotypes retain their awareness of their minority status and may react negatively when confronted by the positive stereotypes. Contributing to the potential of problem positive stereotypes is research that suggests that positive stereotypes are less likely to be viewed as inappropriate and as a result,

individuals are less likely to modify their social judgments (Lambert, Khan, Lickel, & Fricke, 1997).

Some critics of the term homophobia feel that the use of “phobia,” or fear, does not fully capture the hate and intolerance espoused by some individuals who are labeled as homophobic. By focusing on the fear aspect of a person manifesting homophobic-like behaviors, those behaviors could be conceptualized as justified reactions to a feared stimulus. For example, Fox (2009) compared homophobia with another common phobia, arachnophobia, and observed that when people who are afraid of spiders are exposed to a spider, they react in an overly emotional and irrational way, but that society accepts these behaviors because the person has a legitimized fear of spiders. Fox argued that bigoted terms like “faggot” or “dyke” are more acceptable than racial slurs because homophobic slurs are simply fearful reactions to a feared stimulus (gay men or lesbian women). Bigoted racial terms, on the other hand, are “racist” and have no equivalent phobic rationale to justify them, making them unacceptable in most of today’s society (Fox, 2009).

Similar to the critics who are opposed to the emphasis on fear, many authors propose that homophobia is too broad in its scope and should be split into separate terms that more clearly differentiate the disparate meanings that are currently contained within the unitary term homophobia. The literature on prejudice and homosexuality provides a wide range of alternative definitions and conceptualizations of homophobia and specific components of homophobia. Some of these include *Homonegativity* (Hudson and Ricketts, 1980), *Heterosexism* (Herek, 2000, 2004; Hunter, Shannon, Knox, & Martin, 1998), and *Sexual Prejudice* (Herek, 2000). Other proposed variations on homophobia include *Defensive Homophobia* (Meier, Robinson, Gaither, & Heinert, 2006), *Sexual Stigma* (Plummer, 1975), *Homosexphobia* (Levitt & Klassen, 1974),

Erotic Stigma (Rubin, 1984), *Homoerotophobia* (Churchill, 1967), and *Internalized Homophobia* (Malyon, 1982; Weinberg, 1972).

Herek (2000) suggested that the term homophobia implies value judgments about the “irrationality” and “evilness” (p. 20) of antigay attitudes and contains assumptions about the origins, dynamics, and motives underlying negatives attitudes. He proposed that a new construct, sexual prejudice, be adopted into the empirical literature in order to facilitate studies of antigay attitudes without the implied judgments and assumptions, for instance that homophobia is only about the fear of gay men, contained in the construct of homophobia. Herek defined sexual prejudice as “heterosexuals’ negative attitudes toward a) homosexual behavior, b) people with homosexual or bisexual orientation, and c) communities of gay, lesbian, and bisexual people” (p. 19). Herek also suggested that studies of sexual prejudice would contribute to, and benefit from, the wealth of research conducted on other forms of prejudice.

About the Construct of Homophobia

In 1993, O’Donohue and Caselles observed that the concept of homophobia lacked a dominant, unifying conceptualization and that science had yet to clearly identify the construct of homophobia. Ahmad and Bhugra (2010) observed that the question of assessing a reduction in homophobia remains elusive due to the ever-changing nature of what homophobia represents. In the nearly 20 years that have passed since O’Donohue and Caselles’ observations, the construct of homophobia continues to puzzle those who have attempted to define, parse, deconstruct, or even simply understand it. The difficulty in identifying the underlying construct of homophobia is evident in the numerous and varied conceptualizations of homophobia within the empirical literature.

The lack of a widely accepted operational definition of homophobia has been problematic for researchers. Books have been written (e.g. Fone, 2000) and articles have been published (e.g. Herek, 1986, 2000, 2004) on the question of defining homophobia and still there is no consensus. Therefore, in order to make the conceptual approach to homophobia without an explicit definition, various conceptualizations of homophobia are examined with an emphasis on how each relates to mindfulness.

The Construct of Homophobia

One of the earliest attempts to understand the construct of homophobia was by the person who first coined the term, George Weinberg. In his book, *Society and the Healthy Homosexual* (1972), Weinberg listed five possible reasons for homophobia: religious influence, a secret fear of being homosexual, repressed envy, threat to value (e.g. the value of a “one man, one woman” marriage), and existence without vicarious immorality (i.e. not being exposed to the immoral actions and/or beliefs of homosexuals). In this list, several key words stand out as concepts that could be directly addressed with mindfulness techniques: “fear”, “repressed”, and “threat.” From a mindfulness perspective, each of these words can be associated with the inability to clearly and nonjudgmentally perceive the outer and inner world or the inability to accept that which is perceived.

Several studies have conceptualized homophobia as a function of male role types or a reaction to threatened masculinity. Pleck (1981) found that insecure individuals tend to hyperconform to their perceived standards of gender conformity. Parrott, Adams, and Zeichner (2002) hypothesized that homophobic reactions in men were the result of an underlying general negative attitude against feminine characteristics. In their study testing this hypothesis, Parrott et al. (2002) administered a battery of measures to nearly 400 male undergraduate students.

Included in the battery were measures of homophobia, hypermasculinity, adversarial sexual beliefs, and hostility towards women. Parrott et al. found significant positive relationships between homophobia and an exaggerated sense of masculinity, as measured by endorsements of violence as a manly attribute, callous sexual beliefs, and finding danger exciting. Results from their study suggested that homophobia was not the result of negative sentiments towards men, but instead represented negative sentiments against feminine characteristics (Parrott, Adams, & Zeichner, 2002).

Herek (1986) proposed that homophobia exists on both an individual and an institutional level. An analysis of Australian men's attitudes towards masculinity, conducted by McCann, Minichiello, and Plummer in 2009, found data that indicated that homophobia was a socially constructed attribute that served the function of policing boundaries of masculinity. According to their research, homophobia has a profound influence on the shaping and constraining of many aspects of modern manhood. This influence is especially relevant during adolescence when the self is compared with socially constructed positive and negative perceptions of masculinity (McCann, Minichiello, & Plummer, 2009). McCann et al.'s (2009) research provides an important connection with the mindfulness literature because of the emphasis on the *constructed* nature of what homophobia represents within the individual. If an adolescent were able to recognize that the homophobic experience was a reaction to the social construct of masculinity, it would be possible for the adolescent to derive a different meaning from their experience.

In a paper examining questions about sexual prejudice, Herek (2007) discussed homophobia as a societally enforced construct. Through a combination of ideology (e.g. religion) and institutional systems (e.g. bans on same-sex marriage or military service), a homophobic message is perpetually conveyed as a societal norm. Unless challenged, the beliefs

and assumptions of members of the majority (in this case, heterosexual individuals) are not perceived to be prejudiced. For the sake of societal change, mindfulness training could help the heterosexual majority learn to question their assumptions about how they perceive the world by returning attention to the very building blocks of belief (thoughts, emotions, and physical sensations).

The Links Between Homophobia and Empathy

In 1997, Batson et al. proposed that experiencing empathy for a single member of a stigmatized group could help to improve an individual's feelings for the entire group. They conducted a series of experiments that increased and measured empathy towards different stigmatized groups. In these studies, empathy was defined as an "other-oriented emotional response congruent with another's perceived welfare" (Batson et al., 1997, p. 105). Based upon the results of these experiments, Batson and colleagues developed a three-step model for how empathy could improve attitudes towards a stigmatized group. The first step involved adopting the perspective of a needy individual who is a member of a stigmatized group, leading to increased empathic feelings for the individual. In the second step, feelings of empathy increased the perception of the value of the needy individual's welfare. In the third step, the increased valuing of the individual generalized to the group, provided that the needs of the individuals were related to the needs of the group as a whole. Batson et al. found that once individuals were sensitized to the negative emotions experienced by the stigmatized group, they were more likely to report empathic feelings towards members of non-stigmatized groups.

In another study examining the potential of reducing discrimination through increasing empathy, participants were either instructed to think about victims of discrimination using an empathic perspective or to read about acts of discrimination (Finlay & Stephan, 2000). The

results of this study indicated that both conditions yielded lower scores on a measure of discrimination than control groups. Galinsky and Moskowitz (2000) conducted a series of studies that examined the role of perspective-taking (one of the four subtypes of empathy measured by the present study) in reducing biases against stereotyped groups. They found that through perspective-taking, individuals were less likely to access stereotyped responses to groups they may have otherwise expressed prejudice towards. Further, the attention of the perspective-taking individual is focused outwards towards the target individual, resulting in an increase in an awareness of similarities between the two individuals.

Johnson, Brems, and Alford-Keating (1997) examined several variables that appeared conceptually related to homophobia but had been unexplored as correlates prior to their study. One of these variables involved the relationship between empathy and homophobia. To assess empathy, they used the Interpersonal Reactivity Index which is designed to assess four different aspects of empathy. Two of these aspects, represented as subscales “empathic concern” and “perspective taking”, were found to be inversely correlated with homophobia.

Empathy

“Empathy” is a term that comes from the German word “*Einfühlung*” which means “human’s spontaneous projection of real psychic feeling into the people and things they perceive” (Duan & Hill, 1996 p. 261). Within the field of psychology, there are a number of different definitions and conceptualizations of what empathy means. The majority of these definitions include some form of stepping into the shoes of another and gaining insight from the process.

Davis (1980, 1983) reviewed literature on the construct of empathy dating as far back as 1759 and identified two separate conceptualizations of empathy. The first saw empathic

responses as innate, or instinctive, while the second focused on the cognitive ability to recognize the experiences of others. Though each conceptualization was studied, it was the cognitive version that was most heavily researched in the early 1900s. In the 1970s, researchers began to shift toward the view of empathy as an affective quality. As the affective conceptualization of empathy gained in popularity, the movement towards integration of the cognitive and affective conceptualizations soon followed (Davis, 1980). Davis examined the various assessment tools that were used to study empathy and identified four unique elements of empathy: Perspective-Taking (PT), Empathic Concern (EC), Personal Distress (PD), and Fantasy (FS) (Davis, 1980). Davis operationalized this multidimensional conceptualization of empathy in the Interpersonal Reactivity Index (IRI: Davis, 1980, 1983). The IRI is used in the present study.

The Links Between Empathy and Mindfulness

Finlay and Stephan (2000) wrote “Empathy can be induced in several ways, take a variety of forms, and influence different aspects of attitudes” (p. 1733). Block-Lerner, Adair, Plumb, Rhatigan, and Orsillo (2007) proposed that the different components of mindfulness, which will be discussed in the next section, can be seen as processes that promote the development and maintenance of empathy. They hypothesized that empathy would increase as an outcome of the process of mindfulness. Block-Lerner and colleagues’ hypothesis is supported by a growing body of literature which examines the relationship between mindfulness and empathy.

A study conducted by Shapiro, Schwartz, and Bonner (1998) examined the effects of a mindfulness based treatment program on medical and premedical students and found that empathy scores increased following mindfulness training. Shapiro et al.’s training program was modeled after the Mindfulness-Based Stress Reduction (MBSR) program, developed by Kabat-

Zinn in 1990. It included seven sessions that were each 2.5 hours long, assignments for practicing at home, and journaling. Participants in the study received training in various types of meditation, didactic presentations on mindfulness concepts, and experiential exercises to cultivate mindful listening. At the conclusion of the training period, empathy scores had significantly increased for the students who received the training versus those in the wait-list condition. In another study of using mindfulness with medical practitioners, Beddoe and Murphy (2004) examined the influence of mindfulness on nursing students. The students who attended the MBSR training reported high levels of attitude change, including lower distress when observing suffering in others and decreased identification with fictional characters as a way to avoid experiencing discomfort. In a previous study, Davis (1980) linked decreased personal distress with increased empathy which suggests that, based upon the outcomes reported by Beddoe and Murphy, mindfulness-based interventions increased the level of empathy.

A small and relatively new body of literature has found a positive correlation between empathy and self-compassion (Germer, 2009; Neff, 2004, 2009, Van Dam, Sheppard, Forsyth, & Earleywine, 2011). Self-compassion can be conceptualized as part of the construct of mindfulness, particularly as self-compassion relates to the mindfulness concept of non-judging awareness of inner experiences. Neff (2004) defined self-compassion as “having three main components: self-kindness versus self-judgment, a sense of common humanity versus isolation, and holding one’s painful thoughts and feelings in mindful awareness versus over-identification with them” (p. 30). Germer (2009) described self-compassion as a necessary component of the positive mental states utilized and cultivated by mindfulness-based interventions. Implicit within Neff’s definition and Germer’s description of self-compassion is the awareness and perception of humanity as a collection of individuals who share imperfections, failures, and mistakes.

Furthermore, the awareness of one's common humanity, which can be increased through practicing self-compassion, can have the effect of essentially placing the individual in the shoes of another or, put another way, can increase an individual's capacity for empathy. According to Van Dam et al. (2011), the recognition that one's suffering is inherent to the nature of life increases the sense of connection to others and is similar to the mindfulness concept of decentering, which is described by Fresco, Segal, Buis, and Kennedy (2007) as a non-judgmental acceptance of current thoughts and feelings.

Mindfulness

Mindfulness is a concept that originated over 2,500 years ago from the religious, philosophical, and mind-training tradition that is now known as Buddhism (Kang & Whittingham, 2010). In the Buddhist tradition, mindfulness is described as "bare awareness" or a nonjudgmental registering of events as they occur and is considered "the heart of Buddhist meditation" (Kabat-Zinn, 2011, p. 283). Despite the rich history of mindfulness in Eastern religion, it is still a relatively new concept to much of Western culture and, in particular, to Western medicine (Williams & Kabat-Zinn, 2011).

A central component of mindfulness is the cultivation of a specific type of awareness. Many of the mindfulness-based interventions discussed in this paper incorporate one or more forms of meditation as a way of developing this particular mode, or process, of awareness. These meditation practices often focus on internal experiences such as physical or bodily sensations, thoughts, and emotions (Kabat-Zinn, 1990). Once a practitioner has learned how to arrive at a mindful mode of awareness, the necessity of the techniques used to enter that mode (e.g. meditation) diminishes. So while meditation itself can be considered to be a mindful

practice, it is at the same time a vehicle through which a mindful mode of attention can be reached. With practice, this type of attention can be achieved without meditation.

Though relatively new to the field of psychology, mindfulness-based interventions have already been found to reduce symptoms and distress caused by a number of psychological disorders including generalized anxiety disorder (Kabat-Zinn et al., 1992), social anxiety disorder (Goldin & Gross, 2010; Piet, Hougaard, Hecksher, & Rosenberg, 2010), depression (Kumar, Feldman, & Hayes, 2008), posttraumatic stress disorder (Kearney, McDermott, Martinez, & Simpson, 2012), attention deficit hyperactivity disorder (Zylowska et al., 2008), and substance abuse (Brewer et al., 2009). Mindfulness-based interventions have also been shown to reduce suicidal behavior (Williams, Duggan, Crane, & Fennell, 2006), reduce relapse of depressive symptoms (Kuyken et al., 2008), and help improve the quality of life for individuals who have been affected by cancer (Foley, Baillie, Huxter, Price, & Sinclair, 2010). Mindfulness-based interventions have also been used in medical settings for pain management (Kabat-Zinn, 1994). A thorough review of all psychological and medical applications of mindfulness-based interventions is beyond the scope of this paper. For an extensive review of studies empirically supporting the efficacy of mindfulness in improving psychological health, the reader is directed to Keng, Smoski, and Robins (2011).

Prior to the 1980s, the concept of mindfulness was associated with spiritualism (Cardaciotto, Herbert, Forman, Moitra, & Farrow, 2008). The term “mindfulness” has been in the English language for over 300 years but did not become part of the scientific literature until the 1990s (Dryden & Still, 2006) despite major mindfulness publications by Kabat-Zinn (1982) and Langer (1989) over two decades ago. The delay in academic interest was possibly due to the lingering association within academia of mindfulness with spiritualism. In an interview

reflecting upon the development of his mindfulness-based stress reduction program (MBSR), Kabat-Zinn (2011) stated that he was initially very careful to avoid emphasizing the Buddhist origins out of concern that his research would be dismissed as “New Age” or “Eastern Mysticism” and not be taken seriously (p. 282). Williams and Kabat-Zinn conducted a search in 2011 for scientific literature with the word “mindfulness” in either the abstract or the list of keywords. Their search revealed little to no publications meeting this criteria until the early 1990s, at which point the number of publications steadily increased. Their final search showed over 350 publications in 2010, indicative of a growing academic interest in mindfulness research (Williams & Kabat-Zinn, 2011).

In 1982, Kabat-Zinn described the use of mindfulness to help reduce the suffering of chronic pain patients at a hospital in Massachusetts. This paper outlined the structure for a program designed to teach mindfulness meditation as a way to reduce the experience of pain. Kabat-Zinn, who at the time was a seasoned practitioner of meditation, had observed that extended periods of meditation were sometimes accompanied by intense pain that he likened to chronic pain. Meditation texts from various traditions include numerous references to pain and provide instructions for cultivating detachment from the pain which Kabat-Zinn hypothesized could be applied to chronic pain patients. Kabat-Zinn selected specific mindfulness techniques from the Buddhist traditions and, in essence, created a manualized approach to mindfulness (Kabat-Zinn, 1982).

Some of these techniques selected by Kabat-Zinn included mindful breathing meditation, body scans, and yoga. In mindful breathing meditation, practitioners focus their attention on their breathing and how they physically experience the breath (e.g. does the breath feel most prominent in the rise and fall of the chest or perhaps the breath is more noticeable in a person’s

nostrils or throat?). A body scan is a systematic process wherein practitioners lay or sit still and focus their attention on each part of their body with the intention of noticing the physical sensations associated with that body part. Yoga is a technique that builds upon the body scan by focusing attention on the body as it flexes and maneuvers through different yoga postures (Kabat-Zinn, 1990). These techniques, along with the others that Kabat-Zinn selected, allowed researchers to carry out studies on the efficacy of mindfulness that were well-controlled and replicable. In doing so, Kabat-Zinn introduced the concept of mindfulness to the secular scientific community of the West (Dryden & Still, 2006).

The Term “Mindfulness”

Mindfulness is a term that can have a variety of meanings. Broadly defined, it can refer to a particular mode of awareness, the process of achieving that mode of awareness, or the practice of being in the mode of awareness. Many researchers developed idiosyncratic definitions for mindfulness after Kabat-Zinn brought mindfulness to the attention of Western medicine (Baer & Huss, 2008; Bishop et al., 2004; Brown, Ryan, & Creswell, 2007; Langer, 1989; Linehan, 1993; Shapiro, Carlson, Astin, & Freedman, 2006). Within the field of psychology, mindfulness has been described in a number of ways including “paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally” (Kabat-Zinn, 1994, p. 4), “bringing one’s complete attention to the present experience on a moment-to-moment basis” (Marlatt & Kristeller, 1999, p.68), and “the nonjudgmental observation of the ongoing stream of internal and external stimuli as they arise” (Baer, 2003, p. 125). Although similar, these and other definitions lacked a unified description of the construct of mindfulness. The absence of an accepted definition of mindfulness seems to have limited the ability of the scientific community to conduct meaningful research into the mechanisms of action within

mindfulness. As the number of idiosyncratic definitions of mindfulness has increased, so too have the attempts to create a comprehensive and inclusive definition of mindfulness.

In 2004, Bishop and his colleagues conducted a series of meetings with the goal of operationally defining mindfulness. They were motivated to meet out of a mutual desire to establish a framework that would allow for testable theoretical predictions about the influence of mindfulness that could be validated and refined by the scientific community. To achieve this, Bishop and colleagues deconstructed a number of different conceptualizations of mindfulness in search for the common, defining components. At the conclusion of their meetings, they proposed a two-component model of mindfulness. Broadly described, the first component is self-regulation of attention, which involves sustained attention, switching attention, and nonlaborative attention. The second component is a particular orientation to experience which involves cultivating an attitude of curiosity, openness, and acceptance towards one's experiences (Bishop et al., 2004). The operational definition of mindfulness proposed by Bishop et al. established a common framework for studying mindfulness and has been widely utilized in the empirical literature published after 2004.

When considering research prior to 2004, it is important to note an additional outcome of the Bishop et al. meetings. In attempting to construct an operational definition of mindfulness, they found that some of the conceptualizations in the empirical literature confounded the *outcome* of being mindful with the construct of mindfulness. Some of these confounding qualities were patience, trust, nonreactivity, wisdom, and compassion (Bishop et al., 2004). Because the primary goal of these meetings was to create a definition of mindfulness that would allow for rigorous scientific examination, it was important to condense the concept of mindfulness to its most essential form. The identification of confounding variables, in addition

to highlighting the structure of mindfulness, thus provided a filter with which to interpret prior research on mindfulness.

A Note on the Choice of the Mindfulness Construct

As with homophobia, a universally accepted and operationally defined conceptualization of mindfulness has yet to be achieved. Bishop and colleagues (2004) conducted the most comprehensive examination of mindfulness to date, yet their definition of mindfulness is not fully accepted within the research community even though many contemporary models of mindfulness share a number of similarities which are represented in the Bishop model. Coffey, Hartman, and Fredrickson (2010) examined the recent literature on mindfulness and concluded that the construct of mindfulness is still without an acceptable, universal definition. They supported the conclusions by Bishop et al. (2004) regarding the two facets of mindfulness, present-centered attention and acceptance of experience. For the purposes of this paper, the Bishop et al.'s model will be considered the foundation to other models of mindfulness unless otherwise specified (e.g. the inclusion of "Creation of New Categories" as part of Langer's (1989) definition of mindfulness).

Mindfulness-Based Interventions

The study of mindfulness has generated, and continues to produce, a variety of treatment modalities that utilize mindfulness techniques to varying degrees. A review of mindfulness treatment modalities was conducted to help build the approach for the current study. Four of these interventions have been widely utilized, extensively studied, and are the most commonly encountered treatments that use mindfulness. These include Mindfulness-Based Stress Reduction (MBSR) (Kabat-Zinn, 1982), Acceptance and Commitment Therapy (ACT) (Hayes, Strosahl, & Wilson, 1999), Mindfulness-Based Cognitive Therapy (MBCT) (Segal, Williams, &

Teasdale, 2002), and Dialectic Behavior Therapy (DBT) (Linehan, 1993). MBSR, ACT, and MBCT utilize an approach to mindfulness that is primarily focused inward on the internal flow of thoughts, feelings, and physiological experiences. DBT includes elements of internal focus as well as an increased focus on external events. Redirecting focus on the external environment is a type of mindfulness introduced by Langer's (1989) model of mindfulness.

Mindfulness-Based Stress Reduction

Mindfulness-Based Stress Reduction (MBSR), developed by Kabat-Zinn (1990), was the first formalized treatment intervention to utilize mindfulness-based techniques. It was also the first program to generate empirically-based literature detailing the effectiveness of mindfulness for medical, social, educational, intercultural, and work-site settings (Kabat-Zinn, 2003). The MBSR program is eight-to-ten weeks long with instructional sessions that last from two-to-three hours each week. Participants are required to engage in mindfulness practice for 45-60 minutes during each day of the program. Some MBSR programs conclude with a day-long meditation retreat (Keng, Smoski, & Robins, 2011).

To teach, explore, and practice mindfulness, MBSR uses several exercises such as the raisin meditation, body scan, and breath-focused meditation. In the raisin meditation, a participant is given a raisin and is instructed to try to perceive the raisin as if it was an entirely new object. In this way, the student is being asked to examine the tendency to react to previously-created labels and thoughts. Like the raisin meditation, the body scan is designed to help students reintroduce themselves to their body and the range of bodily sensations that are ignored. Breath-focused meditation is an exercise that initially helps students become aware of their internal experiences (thoughts, feelings, physical sensations). The breath-focused

meditations later become more complex and evolve into an exercise of acceptance by observing the impermanence of the internal states (Kabat-Zinn, 1990).

Acceptance and Commitment Therapy

Acceptance and Commitment Therapy (Hayes, Strosahl, & Wilson, 1999) is an intervention that is based on the conceptualization that psychopathology results from unhealthy attempts to avoid or suppress thoughts, emotions, or physical sensations (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). ACT posits that individuals may become fused with their internal experiences and perceive their internal states as reflections of themselves. Consequently, stress increases as the individual attempts to avoid the negative internal experiences (thoughts, feelings, or physical sensations). The individual may begin to restrict behavior and avoid situations that give rise to the undesired internal states (Block-Lerner, Adair, Plumb, Rhatigan, & Orsillo, 2007). Mindfulness is used to help individuals identify unhealthy and ineffective control strategies (e.g. avoidance), learn to simply notice the presence of unpleasant and difficult emotions and thoughts, accept the troubling emotions and thoughts as transient, and redirect attention towards healthier and more productive behaviors (Bach & Hayes, 2002).

Mindfulness-Based Cognitive Therapy

Mindfulness-Based Cognitive Therapy (Segal, Williams, & Teasdale, 2002) was developed with the goal of integrating aspects of cognitive behavioral therapy for depression (Beck et al., 1979) with techniques used in MBSR (Kabat-Zinn, 1990). MBCT was originally designed to prevent the relapse of depression, but it has been shown to be effective with a growing number of other maladies including active depression (Barnhofer et al., 2009), bipolar disorder (Williams et al., 2008), and social phobia (Piet, Hougaard, Hecksher, & Rosenberg,

2010). MBCT utilizes mindfulness techniques to help an individual change their awareness of, and relationship with, their negative thoughts and associated emotions. For individuals with a history of depression, the negative emotions that accompany depressive moods become associated with automatic negative thoughts. As a result, when an individual is not depressed but experiences a negative thought, the association with the depressed mood may lead to a depressive episode. Mindfulness helps individuals separate their thoughts from their moods, and in so doing, diminishes the impact of the thought on the mood (Segal, Williams, & Teasdale, 2002).

Dialectic Behavior Therapy

Linehan (1993) developed and applied her own conceptualization of mindfulness as part of her dialectic behavior therapy. In DBT, mindfulness is divided into two main categories, the “what” and the “how,” each consisting of three skills. The “what” category includes fully observing internal and external stimuli, describing these stimuli with words, and fully participating in the activities of the current moment. The “how” category includes taking a nonjudgmental stance, focusing complete attention on the present moment, and engaging in effective behavior. The desired outcome of practicing DBT mindfulness skills is an increased tolerance for unpleasant affective experiences (e.g. not responding in a self-destructive way when experiencing the perception of rejection by another person).

Langer’s Model

Although not entirely consistent with the construct of mindfulness proposed by Bishop et al. (2004), Langer’s (1989) contributions to the study of mindfulness should be noted because of its continued significance. Langer introduced her definition of mindfulness in 1989, well before the meetings by Bishop and colleagues. Langer’s conceptualization of mindfulness has been used

by a number of researchers in the past three decades and has generated a large body of empirical literature. Langer proposed a three-fold definition of mindfulness as "creation of new categories; openness to new information; and awareness of more than one perspective" (p. 62). This definition is further explained by contrasting it against "mindlessness" which Langer described as being trapped by old categories, responding and behaving to external stimuli automatically, and basing actions upon a single perspective (Langer, 1989). Langer's version of mindfulness differs from the other conceptualizations in this paper primarily in where the focus of attention rests. In Langer's version, the primary focus is on increasing one's awareness to external stimuli in order to facilitate the development of new categories and meaning. The other conceptualizations discussed focus mainly on internal stimuli such as thoughts, emotions, and physical sensations.

The two models or versions of mindfulness are not conceptually compatible for empirical purposes, mainly due to the very different foci of attention. However, the two models are not mutually exclusive. It is not unreasonable to expect that through utilizing one version of mindfulness, the other version would naturally increase as well. For example, if an individual increased their mindfulness via practices defined by Kabat-Zinn (e.g. 1990), the individual would increase their awareness of their internal experiences (thoughts, feelings and physical sensations) related to the external environment. An increase in this type of awareness could lead to an increase in an individual's awareness of the environment and their actions within that environment (as proposed by Langer in 1989).

Regardless of how it is defined, it is clear from both academic and traditional literature that mindfulness practices can produce a wide range of benefits. From ancient anecdotes to fMRIs, the influence of mindfulness has spread, and continues to spread, throughout the cultural

ideas of what it means to be healthy (Pollak, Pedulla, & Siegel, 2014). Modern science has only recently begun to examine mindfulness, and while there are some areas that have already been shown to benefit from mindfulness intervention, others have yet to be examined. The cultural phenomenon of homophobia is one such area.

The Process of Mindfulness

Before discussing how mindfulness and homophobia are conceptually linked, a more in-depth discussion of the process of mindfulness is necessary. Bishop et al.'s (2004) operational definition of mindfulness was selected for this study because it captures common facets across various definitions for mindfulness within the current empirical literature and also provides an outline for explaining the mechanisms behind mindfulness. Bishop et al. (2004) proposed a two-component model of mindfulness which includes self-regulation of attention and a particular orientation to experience.

The first component, self-regulation of attention, involves developing the skills of sustained attention, switching attention, and nonelaborative attention (Bishop et al., 2004). Mindfulness is based on focusing attention inward and developing an awareness of the internal stimuli (thoughts, emotions, and sensations) that occur in the present moment. Sustained attention allows an individual to become aware of the flow of their internal stimuli from moment to moment. For example, if an individual were to receive an upsetting phone call, the flow of experiences would start with the moment of intellectual awareness of, or thoughts about, the content of the call. The next moment may involve an awareness of an emotional reaction to the thoughts about the phone call. In the final moment of this example, the individual may become aware of a physiological reaction to the emotion, such as tearfulness, muscle tension, or blushing. An individual who has not developed a mindful awareness of their internal space may

attribute their physiological and emotional reaction to the content of the telephone call rather than to their *thoughts about* the telephone call. By increasing awareness of the internal stimuli, the mindful practitioner is able to separate thoughts from emotions and physical sensations, thereby providing a window of opportunity for the interjection of different thoughts.

Another self-regulating skill is the ability to switch the focus of attention (Bishop et al., 2004). In the example of the disturbing telephone call, the recipient of the call may have found it difficult to untangle the internal stimuli without the ability to switch attention from stimulus to stimulus. This skill of attention switching, along with several others, is developed through meditating on one's breath. While meditating, the mind will naturally attend to internal and external stimuli. The practice of switching attention involves recognizing that the mind has shifted its focus from the breath, acknowledging the stimulus that attracted the practitioner's attention, then refocusing on the breath. By developing this skill, a practitioner is able to redirect their attention away from a stimulus that might otherwise preoccupy their attention. For example, in the case of the disturbing telephone call, the ability to shift attention from the telephone call to the thought about the call or from the emotional reaction to the physical reaction help to establish the sequence of stimuli. In recognizing how external events can trigger the sequence of internal events, the practitioner can learn to respond to external events with more conscious choice.

The third self-regulating skill is nonelaborative attention which develops out of the practice of shifting attention (Bishop et al., 2004). When the mind's focus is directed towards a stimulus, the tendency is to mentally elaborate on that stimulus, leading to a stream of thoughts and emotions that move attention away from the in-the-moment experience of the stimulus. In effect, a single stimulus could, without a person's full awareness or permission, redirect the mind

towards a ruminative or predictive cycle of attention, wherein the initial experience of the stimulus becomes lost. Returning to the example of the telephone call, imagine that the content of the call reminded the recipient of an embarrassing event from their past. The feelings of embarrassment are a form of self-judgment (“I should have known better” or “I shouldn’t have done that”) and can send the recipient into ruminative cycle of shame or guilt. In order to cultivate a mindful awareness, the individual learns to observe a stimulus without judging it. If the recipient of the disturbing telephone call responded in a mindful way, their internal response would be awareness that they are being reminded of a time when they experienced embarrassment, acknowledgement of their emotional response, then a redirection of their attention to their breath and the new present moment.

The second component of Bishop et al.’s (2004) definition of mindfulness is a particular orientation to experience. This orientation involves cultivating an attitude of curiosity, openness, and acceptance towards one’s experiences. Underlying this orientation is a commitment to addressing all stimuli that enter the mind, even those that could evoke unpleasant reactions. An attitude of curiosity applies to both the internal and external stimuli that construct the individual’s moment-to-moment experience. To truly and fully examine an experience requires not only the curiosity to explore, but the willingness to be open to that which is found. Openly experiencing a stimulus means consciously abandoning agendas, prejudices, or any other pre-conceived reactions in order to allow a clear reception of current thoughts, feelings, and sensations (Hayes, Strosahl, & Wilson, 1999). Acceptance is an attitude that intuitively follows from curiosity and openness to experience. The cultivation of these three attitudes will increase an individual’s capacity for intensive self-observation which, in turn, will increase understanding of the nature of their thoughts and emotions.

Several additional components should be mentioned when considering the construct of mindfulness. As has been previously observed (Bishop et al., 2004; Coffey, Hartman, & Fredrickson, 2010), some of the literature has confused the outcome of mindfulness with the construct of mindfulness, and while this confound is problematic when trying to identify and explore the construct of mindfulness, the focus of this paper is on the relationship between homophobia and mindfulness. Given the preliminary nature of this research topic, the primary emphasis is on examining the relationship between mindfulness and homophobia, not on identifying which aspect of mindfulness is responsible for the relationship. Consequently, two additional components of mindfulness, impermanence and decentering, both of which have been conceptualized as outcomes of mindfulness, will be included with the understanding that future research could more closely examine the specific mechanisms of mindfulness that may be underlying any relationships uncovered in this study.

Impermanence is a component of mindfulness that is generally considered to be an outcome of mindfulness rather a part of the construct (Coffey, Hartman, & Fredrickson, 2010). Impermanence refers to the awareness that any given internal state, and therefore any reactions to external stimuli, last briefly and are then replaced. Impermanence develops through the focused attention on internal experiences over time. Observation of how one reacts to stimuli leads to an increased awareness of the flow of internal experiences which in turn increases awareness of the passage of time and how experiences relate to the flow of time.

Another component of mindfulness that is sometimes considered an outcome is decentering. Different approaches give different names to this component such as defusion, distancing, or re-perceiving (Shapiro, Carlson, Astin, & Freedman, 2006). These terms refer to the ability to perceive thoughts, emotions, and physical sensations as transient experiences within

the mind rather than elements of the self. The manifestation of this construct arises out of the capacity to observe one's thoughts without judgment, leading to the conclusion by some that it is more accurate to consider decentering to be a result of mindfulness.

The Bishop et al. (2004) model was chosen as a means for discussing the construct of mindfulness due to Bishop and his colleagues' comprehensive and thorough analysis of the many idiosyncratic definitions of mindfulness found in the literature. Bishop et al. discussed methods for assessing the mindfulness construct as the construct was described in their paper; however, these methods were designed to assess mindfulness after a session of mindfulness techniques. The research design in this study does not include a pre-assessment mindfulness session, so an alternative mindfulness measure had to be chosen.

This study utilized the Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2006) to measure mindfulness in participants. Similar to Bishop et al.'s (2004) analysis of the construct of mindfulness, Baer and colleagues examined five contemporary measures of mindfulness (The Mindful Attention Awareness Scale, Brown & Ryan, 2003; The Freiburg Mindfulness Inventory, Buchheld, Grossman, & Walach, 2001; The Kentucky Inventory of Mindfulness Skills, Baer, Smith, & Allen, 2004; The Cognitive and Affective Mindfulness Scale, Feldman, Hayes, Kumar, & Greeson, 2004; and The Mindfulness Questionnaire, Chadwick, Hember, Mead, Lilley, & Dagnan, 2005) in order to determine the common factors. Baer et al. identified five distinct facets of mindfulness, Observing, Describing, Acting with Awareness, Non-Judging of Inner Experience, and Non-Reactivity to Inner Experience, through factor analyses of the five measures. Baer et al. suggested that it may be helpful to conceptualize the construct of mindfulness as multifaceted so as to better understand each facet's relationship with

other variables, as well as with each other. The five mindfulness facets assessed in the FFMQ are examined in relation to the two other measures used in this study.

Theoretical Link Between Mindfulness and Homophobia

In Batson et al.'s (1997) three-step model of how empathy can improve attitudes towards stigmatized groups, one of the limitations identified by Batson and his colleagues was that empathizing with a member of a stigmatized group could be personally threatening to an individual. As a consequence of these threatening feelings, the individual may engage in defensive responses. This potential reaction is particularly relevant with the issue of homosexuality because often there is no explicit indicator of a person's sexual orientation. This could lead to a situation wherein an individual with homophobic beliefs could unknowingly develop a relationship with an individual who is homosexual. If the homosexual individual reveals her or his sexual orientation, the homophobic individual may feel threatened by the number of similarities shared with their object of fear (the homosexual individual). Consequently, empathic feelings could be reduced out of a defensive need to deemphasize those similarities which had previously been the foundations of their relationship. In this example, the feeling of empathy for a feared individual was itself a source of fear which led to a defensive response. But what if the individual with homophobic beliefs were able to challenge their fear? Perhaps the defensiveness that diminished the empathic feelings could also be challenged and allow the previous feelings of empathy to remain intact. One potential way to address this question is through the use of mindfulness.

Within the collection of theoretical foundations of homophobia presented in this paper, a common opening for mindfulness-based interventions seems to have emerged. Although the definition of homophobia varies, what is consistent throughout virtually all definitions is the

negative emotional reaction (e.g. fear, hatred, disgust) of the homophobic individual, based upon a pre-existing belief, in the presence of a stimulus that suggests homosexuality (e.g. a gay character on a television show or a refusal by a peer to conform to culturally-sanctioned male gender roles). Mindfulness is a quality of consciousness that is free of biases, defenses, or ruminative thinking (Brown, Ryan, & Creswell, 2007). This simple definition captures the theoretical rationale for why mindfulness may prove to be a useful tool in the reduction of homophobia. Through the practice of mindfulness, an individual can learn to question their undesired (e.g. homophobic) thoughts and beliefs and create an opportunity to construct more desirable alternatives. For those individuals for whom homophobic thoughts are *not* undesired, mindfulness techniques can possibly help increase awareness of the thoughts and emotions supporting homophobic reactions and, once faced with the source of the homophobia, provide an impetus for questioning the homophobic beliefs. The following section will discuss the limited literature that supports this process of change.

In 2006, Dasgupta and Rivera conducted a study that examined the relationship between automatic prejudice and conscious processes. They found that consciously held beliefs about equality were a potential motivator to be nonprejudiced and wanted to determine if these beliefs would influence the behavioral expressions of automatic prejudice. They found that when individuals were not motivated by egalitarian beliefs to inhibit their behavior, automatic prejudices were expressed. The presence of consciously held beliefs about equality moderated the expression of automatic prejudice. Dasgupta and Rivera also found that individuals skilled in behavioral control were able to reduce similar expressions of automatic prejudice. These results are encouraging when considering the utility of mindfulness. First, behavioral control is a natural outcome of increased attention to the sequences of stimuli that occur between event (e.g.

exposure to feared or hated object) and action (e.g. expressions of prejudice). Second, the “automatic” quality of prejudice in individuals can be directly examined through utilizing mindfulness techniques such as decentering and nonjudgmental awareness with a goal of challenging the cause and validity of the internal experience of prejudicial attitudes towards others.

A number of studies have examined the influence of mindfulness on reducing prejudice in differing populations. Langer and Imber (1980) found that by priming a mindful state, participants in their study were more accurate in their description of an individual seen on a videotape when compared with participants who were not primed. Langer and Imber theorized that this was due to the non-primed participants’ reliance on stereotypes to interpret the world while the mindfulness group was actively challenging their stereotypes. Two studies demonstrated that ACT was an effective intervention to reduce prejudice. Masuda et al. (2007) found that ACT training helped reduce prejudice towards individuals diagnosed with psychological disorders. A 2004 study by Hayes et al. suggested that utilizing ACT with substance abuse counselors could help reduce stigmatizing attitudes. Although not exclusively a mindfulness technique (recall that ACT incorporates elements of cognitive behavioral therapy), the hypothesized mechanism of change reported in these studies was the reduction of the identification with, and impact of, negative thoughts and feelings about a stigmatized group, both of which are consistent with outcomes of purely mindfulness-based interventions. These studies are considered to be supportive of the conceptual link between mindfulness and homophobia.

Langer, Bashner, and Chanowitz (1985) examined the use of mindfulness to reduce prejudicial thinking about individuals with handicaps. They found that teaching mindfulness to participants increased their capacity to be in the presence of a stigmatized group and decreased

prejudicial behavior. Hayes, Niccolls, Masuda, and Rye (2002) proposed that utilizing mindfulness techniques like decentering and nonjudgmental acceptance, similar to those used in Langer et al.'s study, would be effective in helping individuals challenge their prejudices.

Finlay and Stephan (2000) found that when individuals were instructed to take an empathic perspective towards members of a stigmatized group, those individuals scored lower on measures of discrimination. Similar results were found for individuals who were instructed to read about common acts of discrimination against African-American individuals. Finlay and Stephan proposed that these findings were the result of the individual's empathic connection to the negative emotions experienced by the stigmatized individuals. An important implication of this study is the emphasis on the awareness of the negative emotional reactions. In general, mindfulness increases the capacity for the awareness of both an individual's emotional state and the subtle differences between different emotional states (Kabat-Zinn, 1990). An increased capacity for recognizing and understanding negative emotions within oneself would intuitively increase awareness and recognition of the negative emotions experienced by others, thereby increasing the capacity for empathic feelings for others and, consequently, decreasing prejudicial attitudes towards others (e.g. homophobic beliefs).

Based upon the results of these studies, mindfulness can be understood to influence the mechanisms underlying prejudice. In particular, the increased awareness of one's internal state would seem to allow one to identify and question beliefs that were previously unchallenged as well as potentially relate to the internal experiences of others. What has not yet been studied is whether the influence on prejudice is unique to mindfulness alone or if mindfulness serves to cultivate other qualities, like empathy, that are more directly influential on prejudice.

Research Questions

This study examined whether mindfulness adds to the explanation of variance in homophobia that is already accounted for by empathy. In order to address this question, several research questions were posed. The first examined the relationship between empathy and homophobia. This relationship has been established in previous research (Johnson, Brems, & Alford-Keating, 1997) but was replicated utilizing the specific measures chosen for this study. The second question considered the relationship between mindfulness and empathy. Only a small body of literature has examined this relationship despite a number of conceptual links between the two constructs. The third question first explored the relationship between mindfulness and homophobia. While no literature could be found that directly studied this relationship, it was expected that a relationship would be discovered, based upon the theoretical connection between empathy and homophobia described early in this study. The second part of the third research question examined what happened to the mindfulness-homophobia relationship when empathy was added. If empathy had been found to account for a greater change in homophobia than mindfulness, this would have suggested that empathy was the true mechanism underlying mindfulness for the purposes of reducing homophobia. However, if mindfulness had been found to account for more change, this would have suggested that there was something about mindfulness that went beyond empathy in relation to homophobia.

CHAPTER THREE

METHODOLOGY

Participants

A total of 200 student participant responses were collected from the Psychology Subject Pool via the SONA system. Students participated in exchange for required research credit in their General Psychology course. No restrictions were placed on which students were allowed to volunteer to participate. Student participants were able to complete the online survey on any computer that was convenient for them, and they were given a maximum of one hour to complete all portions of the survey.

There were 159 (79.5%) female and 41 (20.5%) male participants. The majority of the participants were either freshman (74%) or sophomores (21%). Juniors (2%) and seniors (3%) comprised the remainder of the total. The majority of the participants were 18 year olds (59.5%) or 19 year olds (26.5%). Seven and a half percent of the participants were 20 year olds and the participants ages 21 or older represented 6.5% of the total. Ninety one percent of respondents reported no prior formal or informal training in mindfulness. Ninety three percent of respondents indicated that their sexual orientation was heterosexual. Those who reported being homosexual/lesbian female comprised .5%, bisexual 3%, and pansexual 3.5%. No participants reported a sexual orientation of homosexual/gay male. Most of the participants were white American/Caucasian (non-Hispanic) (88%). The second-most represented racial group was Black/African/African American/Black American (6.5%), followed by biracial (2.5%), Hispanic/Latino(a)/Spanish/Hispanic American/Latino(a) American (2%), and Asian/Asian American/Pacific Islander (1%). See Table 3 for the complete demographic range of participants.

Table 3

Demographic Characteristics of Participants (N=200)

<i>Characteristics</i>	<i>Sample n</i>	<i>Percentage of sample</i>
Sex		
Female	159	79.5
Male	41	20.5
Age		
18	119	59.5
19	53	26.5
20	15	7.5
21	5	2.5
22	2	1.0
23	1	0.5
24 or older	5	2.5
Year in College		
Freshman	148	74.0
Sophomore	42	21.0
Junior	4	2.0
Senior	6	3.0
Prior Mindfulness Training		
No	182	91.0
Yes	18	9.0
Race		
Asian/Asian American/Pacific Islander	2	1.0
Black/African/African American/Black American	13	6.5
Hispanic/Latino(a)/Spanish/Hispanic American/Latino(a) American	4	2.0
White American/Caucasian (non-Hispanic)	176	88.0
Biracial	5	2.5
Sexual Orientation		
Heterosexual	186	93.0
Homosexual/Lesbian Female	1	0.5
Bisexual (Attracted to men and women)	6	3.0
Other	7	3.5

Data Collection Procedure

Introductory text, serving as the informed consent (Appendix A), the Homophobia Scale (HS; Appendix B), the Interpersonal Reactivity Index (IRI, Appendix C), the Five Facet Mindfulness Questionnaire (FFMQ; Appendix D), a demographics questionnaire (Appendix E),

and a debriefing statement (Appendix F) were uploaded to the SONA system. The uploaded material was formatted for display using HTML code. After IRB approval was obtained, the survey went live with the name “Attitude Survey.” Once the survey went “live,” it was added to a list of surveys from which students were able to choose to participate. After 200 surveys were completed, the data were downloaded and inputted into Microsoft Excel where they were formatted for analysis using SPSS. The downloaded data were stripped of participant names and stored in an encrypted folder on a personal computer. A backup of the data was encrypted and stored on a portable hard drive.

Measures

The measures used in this study were presented to participants in the same order presented here. The order of the measures was an arbitrary choice. The Homophobia Scale (HS) (Wright, Adams, & Bernat, 1999) is a 25-item self-report measure of a participant’s thoughts, feelings, and behaviors with regard to homosexuality (Wright, Adams, & Bernat, 1999). This measure has high internal consistency ($\alpha = 0.94$) and a 1-week test-retest reliability ($\alpha = 0.96$) has been reported. In the present study, a similarly high internal consistency ($\alpha = 0.92$) was found. The HS has also demonstrated concurrent validity through a moderate correlation ($r = .66, p < 0.01$) with the Index of Homophobia (Hudson & Ricketts, 1980). Items include statements such as “*Gay people make me nervous*” and “*When I meet someone I try to find out if he/she is gay.*” Participants were asked to rate the extent to which they agree using a Likert-type scale ranging from 1-5, with “1” being “Strongly agree” and “5” being “Strongly disagree.” Participants’ total scores were calculated then reversed so that higher scores indicate higher levels of negative attitudes towards homosexuality. The range of total scores on the Homophobia Scale is 25 to 125. To reverse score the HS data set, the original data were

subtracted from the sum of the highest (125) and lowest (25) possible scores (150). The resulting data were summed for each participant.

The Interpersonal Reactivity Index (IRI) (Davis, 1980) is a widely used, 28-item self-report assessment designed to measure a set of constructs that underlie the unitary construct of empathy (Davis, 1980, 1996). These constructs are represented in the IRI as four subscales, each comprised of 7 items. The subscales are Perspective Taking, Fantasy, Empathic Concern, and Personal Distress. Each item includes a statement such as “*I believe that there are two sides to every question and try to look at them both*” and “*I really get involved with the feelings of characters in a novel.*” Participants were asked to rate the extent to which they agree using a Likert-type scale ranging from 1-5, with 1 being “Strongly agree” and 5 being “Strongly disagree.”

The IRI Fantasy subscale includes items such as “*When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me*” and “*I daydream and fantasize, with some regularity, about things that might happen to me.*” These items are designed to determine the extent to which participants can identify with fictitious characters in books, plays, or movies. The Perspective-Taking subscale has items such as “*Before criticizing somebody, I try to imagine how I would feel if I were in their place*” and “*I sometimes find it difficult to see things from the “other guy’s” point of view.*” These items are designed to reflect a participant’s ability to see things from the perspective of another individual. The Empathic Concern subscale includes items like “*When I see someone being taken advantage of, I feel kind of protective toward them*” and “*I often have tender, concerned feelings for people less fortunate than me.*” This subscale assesses the tendency of the participant to feel compassion and concern for individuals experiencing negative circumstances. The Personal

Distress subscale is designed to identify a participant's feelings of discomfort or anxiety in the presence of other individuals who experience a negative situation. It is comprised of items like *"When I see someone who badly needs help in an emergency, I go to pieces"* and *"In emergency situations, I feel apprehensive and ill-at-ease."* Participants received scores on each of these subtests as well as an overall empathy rating. Scores on the IRI have been found to be negatively related to scores of racial prejudice (Bäckström & Björklund, 2007).

Standardized alpha coefficients for the IRI subtests range from 0.68 to 0.79. For males, the standardized alpha coefficients are the following for each of the subscales: Perspective Taking ($\alpha = 0.71$), Fantasy ($\alpha = 0.78$), Empathic Concern ($\alpha = 0.68$), and Personal Distress ($\alpha = 0.77$). For females, the standardized alpha coefficients are the following for each of the subscales: Perspective Taking ($\alpha = 0.75$), Fantasy ($\alpha = 0.70$), Empathic Concern ($\alpha = 0.73$), and Personal Distress ($\alpha = 0.75$) (Davis, 1980). Test-retest reliabilities for a 60-75 day time frame were found to range from $\alpha = .61$ to $\alpha = .81$ (Davis, 1980). The 28 IRI items were summed to produce a single score where higher scores represented higher degrees of empathy. For the current study, the IRI was found to have an internal consistency of ($\alpha = 0.61$).

The Five Facet Mindfulness Questionnaire (FFMQ) (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006) is a 39-item self-report questionnaire designed to measure mindfulness utilizing subscales that encompass the various theoretical components that are conceptualized to underlie the unitary concept of mindfulness (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). The FFMQ was created by conducting a factor analysis of existing self-report measures of mindfulness that represented differing conceptualizations of the components of mindfulness. These measures included the Mindful Attention Awareness Scale (Brown & Ryan, 2003), The Freiburg Mindfulness Inventory (Buchheld, Grossman, & Walach, 2002), The Kentucky

Inventory of Mindfulness Skills (Baer et al., 2004), The Cognitive and Affective Mindfulness Scale (Feldman, Hayes, Kumar, Greeson, & Laurenceau, 2007), and The Mindfulness Questionnaire (Chadwick, Hember, Mead, Lilley, & Dagnan, 2005). Theoretical relationships between the differing conceptualizations were tested and produced five factors. Each factor was found to represent a unique and substantial portion of variance within the unitary concept of mindfulness (Baer & Huss, 2008).

The five factors, or facets, in the FFMQ are: Observing, Describing, Acting with Awareness, Non-Judging of Inner Experience, and Non-Reactivity to Inner Experience (Baer et al., 2006). The Observing factor refers to noticing both external and internal stimuli. An example of an Observing item is *“I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.”* The Describing factor assesses the degree to which participants use words to identify and label internal experiences. *“I can easily put my beliefs, opinions, and expectations into words”* is an example of a Describing item. The Acting with Awareness factor refers to a participant’s tendency to either focus on the immediate action or run on autopilot. An item measuring the Acting with Awareness factor is *“When I do things, my mind wanders off and I’m easily distracted.”* The results on this particular item would be reverse scored. Items that assess the Non-Judging of Inner Experience factor measure the degree to which a participant judges (e.g. labels as good or bad) thoughts or emotions. An example of a Non-Judging of Awareness item is *“I criticize myself for having irrational or inappropriate emotions.”* This item is another example of a test item that would be reverse scored. Lastly, the factor of Non-Reactivity to Inner Experience assesses a participant’s ability to allow feelings to freely come and go without being caught up in them. *“I perceive my feelings and emotions without having to react to them”* is an example of a Non-Reactivity to Inner Experiences item (Baer et al., 2006).

Baer and Huss (2008) calculated reliability estimates for the FFMQ using an undergraduate student sample. Standardized alpha coefficients for each factor were reported as: Non-reactivity ($\alpha = .75$), Observing ($\alpha = .83$), Acting with Awareness ($\alpha = .87$), Describing ($\alpha = .91$), and Non-judging ($\alpha = .87$). The current study had standardized alpha coefficients of: Non-reactivity ($\alpha = .6$), Observing ($\alpha = .71$), Acting with Awareness ($\alpha = .85$), Describing ($\alpha = .87$), and Non-judging ($\alpha = .90$). The 39-items on the FFMQ were summed to produce a single score, where higher scores represented higher levels of mindfulness.

Finally, the participants were asked to complete a demographic questionnaire designed to provide information regarding their age, gender/sex, race/ethnicity, sexual orientation, and year in school. In addition, participants were asked a yes or no question about receiving any formal or informal mindfulness training.

Analyses

Based on the review of the literature, this study examined three hypotheses concerning the relationships between homophobia, empathy, and mindfulness using a series of regression analyses.

Research Question 1

Is there a relationship between homophobia and empathy? Previous research has demonstrated a negative correlation between homophobia and empathy using various measures (Batson et al., 1997; Finlay & Stephan, 2000; Hayes et al., 2004; Langer, Bashner, & Chanowitz, 1985; Lillis & Hayes, 2007). This study used the HS and IRI measures and attempted to replicate the results of previous studies that used different measures of homophobia and empathy.

Hypothesis 1. Participants who produce low scores on the IRI (empathy measure) will produce high scores on the Homophobia Scale.

Analysis 1. A regression analysis was performed using SPSS with scores from the IRI entered as the predictor (independent) variable and scores on the Homophobia Scale entered as the criterion (dependent) variable.

Research Question 2

Is there a relationship between mindfulness and empathy? Research has found a positive correlation between mindfulness and empathy measures (Beddoe & Murphy, 2004; Block-Lerner, Adair, Plumb, Rhatigan, & Orsillo, 2007; Shapiro, Schwartz, & Bonner, 1998), and other research has suggested theoretical links between the constructs of mindfulness and empathy (Davis, 1980)

Hypothesis 2. Participants who produce high scores on the IRI (empathy measure) will also produce high scores on the FFMQ (mindfulness measure).

Analysis 2. A regression analysis was performed using SPSS with scores from the IRI entered as the predictor variable and scores on the FFMQ entered as the criterion variable.

Research Question 3

Is there a relationship between mindfulness and homophobia? To date, no research has been found that directly examines this relationship. There is an abundance of conceptually related literature, however, that suggests, via the empathy-homophobia and mindfulness-empathy relationships, that mindfulness and homophobia are negatively correlated (Brown, Ryan, & Creswell, 2007; Dasgupta & Rivera, 2007; Finlay & Stephan, 2000; Hayes, Bissett, et al., 2004; Hayes, Niccolls, Masuda, & Rye, 2002; Langer, Bashner, & Chanowitz, 1985; Langer & Imber, 1980; Masuda et al., 2007)

Hypothesis 3. Participants who produce high scores on the FFMQ will produce low scores on the HS and the FFMQ will account for more of the variability in HS scores than the IRI.

Analysis 3. Two regression analyses were performed using SPSS. In the first analysis, scores from the FFMQ were entered as the predictor variable and scores from the Homophobia Scale were entered as the criterion variable. The second analysis added scores on the IRI as a second predictor variable. Beta weights (β) and p values for the IRI and the FFMQ from the second analysis were compared to investigate whether mindfulness accounted for a significant amount of variance in homophobia beyond that accounted for by empathy.

Additional Analyses

Several sets of independent-samples T tests were conducted to explore the influence of several demographic variables (gender, race, and prior mindfulness training) on the measures of homophobia, empathy, and mindfulness. To conduct the T test for race, participant responses were divided into two groups; white and “respondents of color”. In addition, a regression analysis was conducted using age as the predictor variable and homophobia, mindfulness, and empathy scores as the criterion variables.

CHAPTER FOUR

RESULTS

Research Question 1: Is There a Relationship Between Empathy and Homophobia?

A simple linear regression analysis was conducted using the construct of homophobia as the criterion variable and the construct of empathy as the predictor variable to test the hypothesis that low scores on the IRI will predict high scores on the HS. The construct of homophobia was represented by scores on the Homophobia Scale (HS). The 25 HS items were summed and then reverse-scored, so that higher scores indicated higher levels of negative attitudes towards homosexuality. The range of total scores on the Homophobia Scale is 25 to 125. To reverse score the HS dataset, the original data were subtracted from the sum of the highest (125) and lowest (25) possible scores (150). The HS data met the assumptions of normal distribution.

The construct of empathy was represented by the Interpersonal Reactivity Index (IRI). The 28 IRI items were summed to produce a single score where higher scores represent higher degrees of empathy. The IRI total score was not normally distributed so a log transformation of the data was conducted. This was accomplished in SPSS by recomputing each IRI value as a log 10 of itself. The resulting transformed data set was normally distributed.

As expected, empathy significantly predicted homophobia at the $p < .05$ level ($\beta = -.163$, $p = .021$), as shown in Table 4. These findings support similar studies that examined the relationship between prejudice and empathy (Batson et al., 1997; Birnie, Speca, & Carlson, 2010; Finlay & Stephan, 2000; Hayes et al., 2004; Lillis & Hayes, 2007).

Table 4

Correlations Between Measures

	HS	IRI	FFMQ
HS			
Pearson Correlation	48.03 (18.89)		
Sig. (2-tailed)			
IRI			
Pearson Correlation	-.16*	1.94 (0.05)	
Sig. (2-tailed)	.02		
FFMQ			
Pearson Correlation	-.03	-.11	120.83 (12.59)
Sig. (2-tailed)	.73	.11	

Note. HS = Homophobia Scale; IRI = Interpersonal Reactivity Index; FFMQ = Five Factor Mindfulness Questionnaire.

*Correlation is significant at the 0.05 level (2-tailed).

In addition, the four IRI subscales, Perspective Taking, Fantasy, Empathic Concern, and Personal Distress, were examined using a series of simple linear regressions wherein each subscale was entered as a predictor of HS. Of the four subscales, only Perspective Taking ($\beta = -.874, p = .03$) and Fantasy ($\beta = -.163, p = .00$) were found to be significant predictors of homophobia, as seen in Table 5.

Table 5

Regression Results of Interpersonal Reactivity Index Subscales and Measures

IRI Subscales	HS	FFMQ
Perspective Taking		
Pearson Correlation	-.16*	.14*
Sig. (2-tailed)	.03	.05
Fantasy		
Pearson Correlation	-.20	-.08
Sig. (2-tailed)	.00	.27
Empathic Concern		
Pearson Correlation	-.04	-.05
Sig. (2-tailed)	.54	.46
Personal Distress		
Pearson Correlation	-.01	-.30*
Sig. (2-tailed)	.86	.00

Note. HS = Homophobia Scale; FFMQ = Five Factor Mindfulness Questionnaire.

*Correlation is significant at the 0.05 level (2-tailed).

Research Question 2: Is There a Relationship Between Mindfulness and Empathy?

A simple linear regression analysis was conducted using the construct of empathy, represented by scores from the IRI, as the predictor variable and the construct of mindfulness, represented by scores from the Five Facet Mindfulness Questionnaire (FFMQ), as the criterion variable. The 39 items on the FFMQ were summed to produce a single score, where higher scores represented higher levels of mindfulness. The FFMQ data met the assumptions of normal distribution.

To date, no studies have been identified that examine the association between the FFMQ and IRI. It was expected that mindfulness would significantly predict empathy based upon previous studies that have shown correlations between these two constructs (Atkinson, 2013; Beddoe & Murphy, 2004; Birnie, Speca, & Carlson, 2010; Klimecki, Leiberg, Lamm, & Singer, 2012; Krasner et al., 2009; Langer, Bashner, & Chanowitz, 1985). In the current study, mindfulness was found not to predict empathy ($\beta = -.108, p = .127$). An examination of the IRI subscales, Perspective Taking, Fantasy, Empathic Concern, and Personal Distress, found that, although the IRI total score was not predictive, Fantasy ($\beta = .139, p = .05$) and Personal Distress ($\beta = -.303, p < .001$) were significant predictors of mindfulness (see Table 5).

A post-hoc linear regression analysis of the FFMQ subscales as predictor variables and the IRI total score as the criterion variable found that four out of the five subscales (Observing, Acting with Awareness, Non-Judging of Inner Experience, and Non-Reactivity to Inner Experience) significantly predicted empathy as seen in Table 6.

Table 6

Regression Results of Five Factor Mindfulness Questionnaire Subscales and Measures

FFMQ Subscales	HS	IRI
Observing		
Pearson Correlation	-.03	.26*
Sig. (2-tailed)	.71	.00
Describing		
Pearson Correlation	-.02	.01
Sig. (2-tailed)	.82	.84
Acting with Awareness		
Pearson Correlation	.04	-.30*
Sig. (2-tailed)	.61	.00
Non-Judging of Inner Experience		
Pearson Correlation	-.06	-.30*
Sig. (2-tailed)	.40	.00
Non-Reactivity to Inner Experience		
Pearson Correlation	.03	.19*
Sig. (2-tailed)	.66	.01

Note. HS = Homophobia Scale; IRI = Interpersonal Reactivity Index.

*Correlation is significant at the 0.05 level (2-tailed).

Research Question 3: Is There a Relationship Between Mindfulness and Homophobia?

The final simple linear regression analysis was conducted using the construct of mindfulness as the predictor variable and the construct of homophobia as the criterion variable. As of this writing, no studies have been identified that examine the association between the measures used to represent these constructs, the FFMQ and the HS. Mindfulness was expected to strongly predict a negative homophobia value, however the relationship was not significant ($\beta = -.031, p = .662$). Additionally, none of the FFMQ subscales were found to significantly predict homophobia (see Table 6).

A multiple regression analysis was conducted by adding the IRI to the existing linear regression (mindfulness as predictor, homophobia as criterion) as a second predictor variable (see Table 7). The resulting data indicated that empathy ($\beta = -.17, p = .018$) accounted for a significant portion of the variance in homophobia, but mindfulness did not ($\beta = -.05, p = .54$).

Table 7

Regression Results of HS with FFMQ alone (Analysis 1) and with IRI added (Analysis 2)

	Analysis 1		Analysis 2	
	FFMQ		FFMQ	IRI
HS				
Pearson Correlation		-.03	-.05	-.17
Sig. (2-tailed)		.73	.54	.02*

Note. HS = Homophobia Scale; FFMQ = Five Factor Mindfulness Questionnaire; IRI = Interpersonal Reactivity Index.

*Correlation is significant at the 0.05 level (2-tailed).

Demographic Analyses

Several sets of independent-samples T tests were run that compared three demographic variables, race, sex, and prior mindfulness training, to the measures used in this study, HS, IRI, and the FFMQ. The first compared two race conditions to the outcomes of the three measures. Of the 200 respondents, 176 (88%) indicated that they identified as being white (condition one). Though not ideal, the remaining responses were combined into a single condition “respondents of color” ($n=24$) (condition two), in order to provide enough responses to conduct the T test analysis. Race was not found to be associated with statistically significant effects for empathy $t(198) = 1.02, p = .31$, mindfulness $t(198) = 1.49, p = .14$, or homophobia $t(198) = -1.55, p = .12$ (see Table 8).

Table 8

Results of Independent t-test and Descriptive Statistics for Race and Measures

	Race						t	df	Sig.
	White			ROC					
	M	SD	n	M	SD	n			
HS	47.27	17.88	176	53.63	24.84	24	-1.55	198	.12
IRI	1.94	0.05	176	1.93	0.04	24	1.02	198	.31
FFMQ	121.32	12.61	176	117.25	12.11	24	1.49	198	.14

Note. ROC = Respondents of Color

The second set of independent-samples T tests compared two sex conditions (female and male) to the outcomes of the three measures used in this study. Of the 200 respondents, 159 (79.5%) indicated that they identified as female (condition one) and 41 (20.5%) identified as male (condition two). Homophobia differed according to sex, such that male participants reported a higher degree of homophobia ($M = 59.5$) than did female participants ($M = 45.1$). Sex was found to be associated with significant effects for HS $t(198) = 4.58, p < .01$. Sex was also found to be associated with nearly statistically significant effects for the IRI $t(198) = -1.92, p = .06$. Sex was not found to be associated with statistically significant effects for the FFMQ $t(198) = .44, p = .66$ (see Table 9).

Table 9

Results of Independent t-test and Descriptive Statistics for Sex and Measures

	Sex						t	df	Sig.
	Female			Male					
	M	SD	n	M	SD	n			
HS	45.07	16.58	159	59.51	22.78	41	4.58	198	.00*
IRI	1.94	0.04	159	1.92	0.54	41	-1.92	198	.06
FFMQ	120.63	12.85	159	121.61	11.64	41	.44	198	.66

The final set of independent-samples T tests compared prior mindfulness training (yes or no) to the outcomes of the HS, IRI, and FFMQ. Of the 200 respondents, 18 (9.0%) indicated that they had prior mindfulness training (condition one) and 182 (91.0%) indicated no prior training (condition two). Prior mindfulness training was not found to be associated with statistically significant effects for HS $t(198) = -1.68, p = .95$, the IRI $t(198) = -0.39, p = .70$ or the FFMQ $t(198) = 1.28, p = .20$ (see Table 10).

Table 10

Results of Independent t-test and Descriptive Statistics for Prior Training and Measures

	Prior Training						t	df	Sig.
	Yes			No					
	M	SD	n	M	SD	n			
HS	40.94	15.41	18	48.73	19.09	182	-1.68	198	.95
IRI	1.93	0.03	18	1.94	0.05	182	-.39	198	.70
FFMQ	124.45	13.54	18	120.47	12.47	182	1.28	198	.20

A set of three linear regression analyses was conducted for the demographic variable age. Age was used as the criterion variable and empathy, mindfulness, and homophobia was used as the predictor variables (Table 11). Age was found to significantly predict homophobia ($\beta = .178$, $p = .012$), suggesting that as age increases so does homophobia. Age did not predict empathy or mindfulness.

Table 11
Regression Results of Age and Measures

Demographic Variables	HS	IRI	FFMQ
Age			
Pearson Correlation	.18	-.08	.02
Sig. (2-tailed)	.01*	.28	.82

Note. HS = Homophobia Scale; IRI = Interpersonal Reactivity Index; FFMQ = Five Factor Mindfulness Questionnaire.

*Correlation is significant at the 0.05 level (2-tailed).

CHAPTER FIVE

DISCUSSION

The primary research question of this study was whether mindfulness is a better predictor of homophobia than empathy. To examine this question, several hypotheses were proposed in order to use the HS, IRI, and FFMQ to replicate previous findings that used different measures or combination of measures. This study first examined the relationship between homophobia and empathy using the HS and IRI measures. Results from previous studies were successfully replicated using the HS and IRI. Next, the relationship between empathy and mindfulness was examined using the IRI and FFMQ. Previous research found that empathy significantly predicted mindfulness. This study was not able to replicate these findings, however two of the four IRI subscales were found to significantly predict mindfulness and four of the five FFMQ subscales were found to significantly predict empathy. Lastly, this study examined the association between mindfulness and homophobia and whether it was more predictive than the association between empathy and homophobia. This study failed to show any significant association between mindfulness and homophobia. Since empathy had, in the first research question, been found to significantly predict homophobia the answer to the final question posed in this study is that mindfulness is not a better predictor of homophobia than empathy.

Research Question 1

Empathy was found to negatively predict homophobia. These results were not surprising given that prior research has demonstrated a similar association between empathy and prejudice (Batson et al., 1997; Birnie, Speca, & Carlson, 2010; Finlay & Stephan, 2000; Hayes et al., 2004; Lillis & Hayes, 2007). An examination of the IRI subscales revealed that only Perspective-Taking and Fantasy were significant predictors of homophobia. The other subscales, Empathic

Concern and Personal Distress, were not found to be significant predictors. This difference in significance may be due to the difference in focus between Perspective-Taking/Fantasy and Empathic Concern/Personal Distress and the order effect for the measures given. In Perspective-Taking and Fantasy, the questions assess the degree to which a respondent can imagine the situational point of view or the feelings of another person. Empathic Concern and Personal Distress assess the emotional connection with the experiences of another person. It is possible that the respondents were primed to think of individuals who identify as homosexual as a result of taking the HS immediately prior to the IRI. If a respondent had limited personal contact with individuals who identified as homosexual, their responses may be based on a knowledge of gay and lesbian individuals derived from the media rather than direct contact. A media-based knowledge of individuals who identify as homosexual could seem more familiar to participants who have little or no direct contact with gay or lesbian, thereby making it less threatening to report empathizing with them.

Research Question 2

In this study, empathy was surprisingly found to not predict mindfulness. These results were unexpected as prior research has found correlations between these two variables (Atkinson, 2013; Beddoe & Murphy, 2004; Birnie, Speca, & Carlson, 2010; Greason & Cashwell, 2009; Klimecki, Leiberg, Lamm, & Singer, 2012; Krasner et al., 2009; Langer, Bashner, & Chanowitz, 1985). One possible reason that the present study was unable to demonstrate a similar association between empathy and mindfulness may have been the differences in how the constructs were measured. This study utilized the IRI and FFMQ, but the IRI was used in only two of the aforementioned studies (Beddoe & Murphy, 2004; Greason & Cashwell, 2009) and the FFMQ in just one (Greason & Cashwell, 2009). Another possible reason that this study was

unable to replicate prior results may be due to the difference in data collection methods. This study used an online survey to collect results but the majority of literature cited in this study utilized in person data collection.

An examination of the subscales of the IRI found that the subscales Fantasy and Personal Distress were significant predictors of mindfulness. The Fantasy subscale measures how closely a respondent identifies with fictitious characters. The Personal Distress subscale measures the discomfort a respondent feels when faced with an individual who is experiencing negative circumstances. What these two subscales seem to have in common is an empathic response to an unreal or hypothetical character or situation. The other two subscales, Perspective-Taking and Empathic Concern seem to share a focus more on empathizing with a real individual. In the Fantasy and Personal-Distress subscales, participants are asked to examine their internal reactions towards others while the Perspective-Taking and Empathic Concern subscales are more focused on anticipating the internal reactions of others. It is possible that participants who score higher on the Fantasy and Personal-Distress subscales also score highly on the FFMQ due to a greater capacity or comfort with directing their attention inwards.

A post-hoc analysis of the FFMQ subscales revealed that four out of the five significantly predicted the total IRI score. An unexpected finding was that two of the subscales had negative correlations. It is possible that the two positive and two negative correlations had the effect of cancelling each other out, resulting in a total FFMQ score that does not accurately reflect the significance of the subscales.

Research Question 3

The primary research question explored in this study was the association between mindfulness and homophobia and whether empathy was more predictive of homophobia than

empathy. The findings of this study showed that mindfulness did not significantly predict homophobia. Further, an examination of the five FFMQ subscales found that none of the individual mindfulness facets predicted homophobia. When empathy was added to the regression, the analysis found that empathy was more predictive of homophobia than was mindfulness.

Demographic Analyses

Several of the demographic questions asked did not provide enough responses to allow for analysis. This was most likely due to the demographic spread of the sample of respondents and was not surprising. The demographic categories of age, prior mindfulness training, race, and sex yielded enough responses for analysis. Age was found to significantly predict homophobia, but the direction of this prediction was surprising. Instead of the expected inverse relationship between age and homophobia, the results from this study found that as age increased, so did homophobia. These surprising results may be due to the large number of participants who identified as 18 or 19 years old and the steadily decreasing number of participants who identified as 20, 21, 22, 23 or 24 and older. A more even distribution of age-ranges in the sample of respondents may have produced results more like what was anticipated. Another possible explanation for these results may be related to a connection between when students choose to take general psychology (from which the participants were drawn) and some other variable. For example, students who take general psychology in their freshman year may differ in ways not addressed in this study from students who delay taking the class until later years. The delay may also be related to when students start college. Students who enroll in college right out of high school may vary from classmates who did not go to college immediately after graduation from high school.

Sex was found to be associated with significant effects for homophobia and was very close to significance for empathy ($p = .06$). Male participants had a mean HS score of 59.5 and female participants had a mean HS score of 45.1, suggesting that men are more homophobic than women.. Lastly, neither race nor prior mindfulness training were associated with significant effects for any of the measures. The lack of association between prior mindfulness training and any of the measures was surprising, but these results may be due to the very small number of participants who reported any prior mindfulness training ($n = 18$) and the lack of specificity of what constituted “prior mindfulness training.” For example, an individual may have unknowingly received training in mindfulness concepts when participating in activities such as yoga or martial arts.

Strength of Study

The primary strength of this study is that, as of this writing, no other study has been conducted to examine the associations between mindfulness and homophobia. In addition, this study provided new research questions and laid the groundwork for more robust examinations of the associations proposed in this study, possibly through the use of additional or alternate measures and more sophisticated research designs.

The inclusion and analysis of subscales and demographic variables in this study is another potential strength when considering future research. For example, given that sex was associated with significant effects for homophobia, future studies could more closely examine the role of sex in the outcome measure responses. There were not enough responses in this study to examine the role of the intersection of sex and gender, but a larger sample size of respondents whose sex and gender scores did not match could provide new research in the area of

transgendered individuals. Other demographic variables, such as age and race, may suggest alternate directions of research around the topics of mindfulness, empathy, and homophobia.

Another potential strength of this study was the method of data collection via the SONA system. A study conducted by Booth-Kewley, Larson, and Miyoshi (2007) examined the impact of online surveys on impression management and produced findings that suggested that completion of surveys online allows for a sense of disinhibition. In a study comparing traditional paper and pencil, in-person survey completion versus on-line survey completion, Wood, Nosko, Desmarais, Ross, and Irvine (2006) found poorer survey completion for in-person data collection when discussing highly personal topics, but no differences relevant to the present study. These findings, along with those from similar studies (Cronk & West, 2002; Knapp & Kirk, 2003; Pettit, 2002; Truell et al., 2002) suggest the possibility that collecting data via the online SONA system may have produced more genuine and complete data, especially responses pertaining to negative attitudes towards homosexuality.

The findings of this study did not support the hypothesis that mindfulness provides something beyond increased empathy for predicting homophobia; however this study did replicate prior research that found that empathy negatively predicted homophobia. These findings suggest that the problem of homophobia could be partially addressed by implementing empathy training. For individual clients and providers, using techniques to increase empathy in clients could be helpful interventions for individuals whose presenting problems are related to homophobia or other prejudicial beliefs held by the client.

Limitations

One of the most obvious limitations of this study was the demographic characteristics of the sample of respondents used in this study. The majority of respondents were between 18 and

19 years old, white, female, and heterosexual. Several of the demographic variables assessed in the questionnaire yielded results so small as to render them useless. For example, of the 200 students who participated in this study, not one identified himself as a gay man. In order to analyze race, all racial categories other than white had to be collapsed into a single group. Some races were not represented, such as Native Americans or Alaska Natives, while other races were significantly underrepresented, such as Asians/Asian Americans/Pacific Islanders ($n = 2$) or Hispanics/Latino(a)s/Spanish/Hispanic Americans/Latino(a)s ($n = 4$).

The measures used in this study, including the demographic questionnaire, were presented in the same order for each respondent, starting with the homophobia scale, then the IRI, FFMQ, and demographics. The order of the measures was chosen randomly. This may have resulted in an order effect that primed the participants to respond in a certain way. Given that the HS was first, it is possible that the participants felt compelled to respond in a more socially desirable way which then could have carried over to the subsequent measures. This could be easily addressed in future studies by randomizing the order in which the measures and demographic questionnaire are presented, or, including a measure of social desirability.

Another limitation may have been the nature of the sample of respondents consequent to utilizing the SONA system. Students in introductory psychology classes who are required to volunteer for research participation are allowed to self-select from the available surveys on SONA. The self-selection option may have confounded the analyses by attracting or repelling students who share a common factor. In order to reduce this confound, the survey's name, "Attitude Survey", was intentionally kept vague though there is no way to account for the impact of the survey's name.

Future Research

Perhaps the most significant limitation of the present study is the simplicity of the research design. The participants completed a single packet of surveys, thereby limiting the conclusions that could be drawn from the resulting data. In a study of the influence of mindfulness training on nursing students, Beddoe and Murphy (2004) used a pretest-posttest design and were able to show increased empathy (higher IRI scores) following the training but did not include a mindfulness measure. An expansion upon Beddoe and Murphy's study, including pretest and posttest homophobia and mindfulness measures, as well as the inclusion of a control group, would provide data that could more fully explore the associations among homophobia, empathy, mindfulness and the effects of mindfulness training on the variables. An additional modification would be to expand upon Greason and Cashwell's (2009) study that conducted a path analysis to examine the predictive relationship between mindfulness and counseling and found that mindfulness significantly predicted empathy.

Another avenue to explore is the demographic characteristics of respondents. Of the 200 participants, only 18 reported previous experience with mindfulness. Future research would benefit from drawing from a wider sample pool. In particular, if the number of participants with prior experience in mindfulness is increased, this would allow for alternate research designs, such as an Ex Post Facto study, that would compare responses from participants who had prior training and those who did not.

Though not part of the original research question, the discovery of significance on specific subscales from both the IRI and the FFMQ raised additional questions of which subscales are the most predictive of one another and what value these findings could have in shaping future research. In particular, four out of the five subscales of the FFMQ were found to

significantly predict total scores on the IRI. Two of these four, Acting With Awareness and Non-Judging of Inner Experiences, were found to be negatively correlated with the IRI while the other two, Observing and Non-Reactivity to Inner Experience were positively correlated. Additional research into these unexpected results may provide further insight into the relationship between the facets of mindfulness and empathy. Future studies may also investigate why the fifth subscale, Describing, was such an outlier. In addition, two of the four IRI subscales significantly predicted total scores on the FFMQ and the Fantasy subscale, in particular, was found to also significantly predict homophobia, but there does not seem to be an obvious reason as to why. Perhaps a study that focused on the Fantasy subscale could uncover future research questions in the areas of empathy and mindfulness.

Conclusion

This study was designed in order to explore the possibility that mindfulness could contribute something beyond an increase in empathy in relation to homophobia. The findings in this study did not support this association; however several promising avenues for future research were uncovered. This was a novel and untested research question that seemed like a natural outgrowth from two separate bodies of literature, previously discussed in this paper, that have demonstrated relationships between empathy and prejudice, as well as empathy and mindfulness.

Empathy and prejudice both have a lengthy history as research topics but mindfulness is relatively new to the field of psychology. New applications of mindfulness are being explored and reported at a steadily increasing pace (Williams & Kabat-Zinn, 2011). Future research should continue to explore the associations between mindfulness and homophobia as well as the role empathy may play in reducing prejudice. Perhaps one day there will be a large enough body

of literature on the topic of reducing prejudice that mindfulness or empathy-building programs will start to be included in school curricula and other non-educational settings.

References

- Ahmad, S., & Bhugra, D. (2010). Homophobia: An updated review of the literature. *Sexual and Relationship Therapy, 25*(4), 447–455. doi:10.1080/14681994.2010.515206
- American Psychiatric Association. (1980). *Diagnostic and statistical manual of mental disorders* (3rd ed.). Washington, DC:Author.
- Atkinson, B. (2013). Mindfulness training and the cultivation of secure, satisfying couple relationships. *Couple and Family Psychology: Research and Practice, 2*(2), 73–94. doi:10.1037/cfp0000002
- Bach, P., & Hayes, S. C. (2002). The use of acceptance and commitment therapy to prevent the rehospitalization of psychotic patients: A randomized controlled trial. *Journal of Consulting and Clinical Psychology, 70*(5), 1129–1139. doi:10.1037//0022-006X.70.5.1129
- Bäckström, M., & Björklund, F. (2007). Structural Modeling of Generalized Prejudice. *Journal of Individual Differences, 28*(1), 10–17. doi:10.1027/1614-0001.28.1.10
- Baer, R. A. (2003). Mindfulness training as a clinical intervention: A conceptual and empirical review. *Clinical Psychology: Science and Practice, 10*(2), 125–143. doi:10.1093/clipsy/bpg015
- Baer, R. A., & Huss, D. O. (2008). Mindfulness and acceptance based therapies. In J. Lebow (Ed.), *Twenty-first century psychotherapies: Contemporary approaches to theory and practice* (pp. 123-166). Hoboken, NJ: John-Wiley & Sons.
- Baer, R. A., Smith, G. T., & Allen, K. B. (2004). Assessment of mindfulness by self-report: The Kentucky Inventory of Mindfulness Skills. *Assessment, 11*, 191-206. doi:10.1177/1073191104268029

- Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment, 13*(1), 27–45.
doi:10.1177/1073191105283504
- Baer, R. A., Smith, G. T., Lykins, E., Button, D., Krietemeyer, J., Sauer, S., . . . Williams, J. G. (2008). Construct validity of the five facet mindfulness questionnaire in meditating and nonmeditating samples. *Assessment, 15*(3), 329–342. doi:10.1177/1073191107313003
- Barnhofer, T., Crane, C., Hargus, E., Amarasinghe, M., Winder, R., & Williams, J. M. G. (2009). Mindfulness-based cognitive therapy as a treatment for chronic depression: A preliminary study. *Behaviour Research and Therapy, 47*, 366–373. doi:10.1016/j.brat.2009.01.019
- Batson, C. D., Polycarpou, M. P., Harmon-Jones, E., Imhoff, H. J., Mitchener, E. C., Bednar, L. L., . . . Highberger, L. (1997). Empathy and attitudes: Can feeling for a member of a stigmatized group improve feelings toward the group? *Journal of Personality and Social Psychology, 72*(1), 105–118. Retrieved from <http://www.ncbi.nlm.nih.gov>
- Batson, C. D., Turk, C. L., Shaw, L. L., & Klein, T. R. (1995). Information function of empathic emotion: Learning that we value the other's welfare. *Journal of Personality and Social Psychology, 68*(2), 300–313. doi:10.1037//0022-3514.68.2.300
- Bayer, R. B. (1981). *Homosexuality and American psychiatry: The politics of diagnosis*. Princeton, NJ: Princeton University Press.
- Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy for depression*. New York, NY: Guilford
- Beddoe, A. E., & Murphy, S. O. (2004). Does mindfulness decrease stress and foster empathy among nursing students? *The Journal of Nursing Education, 43*(7), 305–312. Retrieved from <http://www.ncbi.nlm.nih.gov>

- Bhugra, D. (2010). Homophobia: A review of the literature. *Sexual and Relationship Therapy*, 25(4), 456–464. doi:10.1080/14681994.2010.518723
- Birnie, K., Speca, M., & Carlson, L. (2010). Exploring self-compassion and empathy in the context of mindfulness-based stress reduction (MBSR). *Stress and Health*, 26, 359–371. doi:10.1002/smi.1305
- Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N. D., Carmody, J., Segal, Z. V., . . . Devins, G. (2004). Mindfulness: A proposed operational definition. *Clinical Psychology: Science and Practice*, 11, 230–241. doi:10.1093/clipsy/bph077
- Block-Lerner, J., Adair, C., Plumb, J. C., Rhatigan, D. L., & Orsillo, S. M. (2007). The case for mindfulness-based approaches in the cultivation of empathy: Does nonjudgmental, present-moment awareness increase capacity for perspective-taking and empathic concern? *Journal of Marital and Family Therapy*, 33(4), 501–516. doi:10.1111/j.1752-0606.2007.00034.x
- Booth-Kewley, S., Larson, G. E., & Miyoshi, D. K. (2007). Social desirability effects on computerized and paper-and-pencil questionnaires. *Computers in Human Behavior*, 23(1), 463–477. doi:10.1016/j.chb.2004.10.020
- Breiner, S. J. (2003). HOMOPHOBIA: A scientific non-political definition. *NARTH Collected Papers*. Retrieved August 13, 2012, from <http://narth.com/docs/coll-breiner.html>
- Brewer, J. A., Sinha, R., Chen, J. A., Michalsen, R. N., Babuscio, T. A., Nich, C., Grier, A., . . . Rounsaville, B. J. (2009). Mindfulness training and stress reactivity in substance abuse: Results from a randomized, controlled stage I pilot study. *Substance Abuse :Official publication of the Association for Medical Education and Research in Substance Abuse*, 30(4), 306–317. doi:10.1080/08897070903250241

- Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology, 84*, 822-848.
doi:10.1037/0022-3514.84.4.822
- Brown, K. W., Ryan, R. M., & Creswell, J. D. (2007). Mindfulness: Theoretical foundations and evidence for its salutary effects. *Psychological Inquiry, 18*(4), 211–237.
doi:10.1080/10478400701598298
- Buchheld, N., Grossman, P., & Walach, H. (2002). Measuring mindfulness in insight meditation (Vipassana) and meditation-based Psychotherapy: The development of the Freiburg Mindfulness Inventory (FMI). *Journal for Meditation and Meditation Research, 1*, 11-34.
doi:10.1016/j.paid.2005.11.025
- Cardaciotto, L., Herbert, J. D., Forman, E. M., Moitra, E., & Farrow, V. (2008). The assessment of present-moment awareness and acceptance: the Philadelphia Mindfulness Scale. *Assessment, 15*(2), 204–223. doi:10.1177/1073191107311467
- Chadwick, P., Hember, M., Mead, S., Lilley, B., & Dagnan, D. (2005). Mindfulness-based relationship enhancement. *Behavior Therapy, 35*, 471-494.
- Churchill, W. (1967). *Homosexual behavior among males: A cross-cultural and cross-species investigation*. Englewood Cliffs, NJ: Prentice-Hall.
- Coffey, K. A., Hartman, M., & Fredrickson, B. L. (2010). Deconstructing mindfulness and constructing mental health: Understanding mindfulness and its mechanisms of action. *Mindfulness, 1*(4), 235–253. doi:10.1007/s12671-010-0033-2
- Conger, J. (1975). Proceedings of the American Psychological Association, Incorporated, for the year 1974: Minutes of the annual meeting of the council of representatives. *American Psychologist, (June)*, 620–651. Retrieved from <http://psycnet.apa.org>

- Cronk, B. C., & West, J. L. (2002). Personality research on the internet: A comparison of web-based and traditional instruments in take-home and in-class settings. *Behavior Research Methods, Instruments & Computers*, *34*, 177-180. doi:10.3758/bf03195440
- Czopp, A. M. (2008). When is a compliment not a compliment? Evaluating expressions of positive stereotypes. *Journal of Experimental Social Psychology*, *44*(2), 413–420. doi:10.1016/j.jesp.2006.12.007
- Dasgupta, N., & Rivera, L. M. (2006). From automatic antigay prejudice to behavior: The moderating role of conscious beliefs about gender and behavioral control. *Journal of Personality and Social Psychology*, *91*(2), 268–280. doi:10.1037/0022-3514.91.2.268
- Davis, M. H. (1980). A multidimensional approach to individual differences in empathy. *Journal Supplement Abstract Service Catalog of Selected Documents in Psychology*, *10*, 85.
Retrieved from
http://www.uv.es/~friasnav/Davis_1980.pdf
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, *44*(1), 113–126. doi:10.1037//0022-3514.44.1.113
- Davis, M. H. (1996). *Empathy: A social psychological approach*. Boulder, CO: Westview Press.
- Dekeyser, M., Raes, F., Leijssen, M., Leysen, S., & Dewulf, D. (2008). Mindfulness skills and interpersonal behaviour. *Personality and Individual Differences*, *44*, 1235-1245. doi:10.1016/j.paid.2007.11.018
- Dressler, J. (1979). Study of law students' attitudes regarding the rights of gay people to be teachers. *Journal of Homosexuality*, *4*, 315–329. doi:10.1300/J082v04n04_01

- Dryden, W., & Still, A. (2006). Historical aspects of mindfulness and self-acceptance in psychotherapy. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, 24(1), 3–28. doi:10.1007/s10942-006-0026-1
- Duan, C., & Hill, C. E. (1996). The current state of empathy research. *Journal of Counseling Psychology*, 43(3), 261–274. doi:10.1037//0022-0167.43.3.261
- Feldman, G. C., Hayes, A. M., Kumar, S. M., Greeson, J. M., & Laurenceau, J.-P. (2007). Mindfulness and emotion regulation: The development and initial validation of the Cognitive and Affective Mindfulness Scale-Revised (CAMS-R). *Journal of Psychopathology and Behavioral Assessment*, 29(3), 177-190. doi:10.1007/s10862-006-9035-8
- Finlay, K. A., & Stephan, W. G. (2000). Improving intergroup relations: The effects of empathy on racial attitudes. *Journal of Applied Social Psychology*, 30(8), 1720–1737. doi:10.1111/j.1559-1816.2000.tb02464.x
- Foley, E., Baillie, A., Huxter, M., Price, M., & Sinclair, E. (2010). Mindfulness-based cognitive therapy for individuals whose lives have been affected by cancer: A randomized controlled trial. *Journal of Consulting and Clinical Psychology*, 78(1), 72–9. doi:10.1037/a0017566
- Fone, B. (2000). *Homophobia: A history*. New York, NY: Metropolitan Books.
- Fox, C. (2009). It's hatred and intolerance not fear. *Gay and Lesbian Issues and Psychology Review*, 5(3), 160–166.
- Fresco, D. M., Segal, Z. V., Buis, T., & Kennedy, S. (2007). Relationship of posttreatment decentering and cognitive reactivity to relapse in major depression. *Journal of Consulting and Clinical Psychology*, 75(3), 447–455. doi:10.1037/0022-006X.75.3.447

- Galinsky, A. D., & Moskowitz, G. B. (2000). Perspective-taking: Decreasing stereotype expression, stereotype accessibility, and in-group favoritism. *Journal of Personality and Social Psychology*, 78(4), 708–724. Retrieved from <http://www.ncbi.nlm.nih.gov>
- Germer, P. (2009). *The mindful path to self-compassion: Freeing yourself from destructive thoughts and emotions*. New York, NY: Guilford Press.
- Goldin, P. R., & Gross, J. J. (2010). Effects of mindfulness-based stress reduction (MBSR) on emotion regulation in social anxiety disorder. *Emotion*, 10(1), 83–91.
doi:10.1037/a0018441
- Greason, P., & Cashwell, C. (2009). Mindfulness and counseling self-efficacy: The mediating role of attention and empathy. *Counselor Education and Supervision*, (49), 2–19.
Retrieved from <http://medcontent.metapress.com/index/A65RM03P4874243N.pdf>
- Hayes, S. C., Bissett, R., Roget, N., Padilla, M., Kohlenberg, B. S., Fisher, G., . . . Niccolls, R. (2004). The impact of acceptance and commitment training and multicultural training on the stigmatizing attitudes and professional burnout of substance abuse counselors. *Behavior Therapy*, 35, 821–835. doi:10.1016/S0005-7894(04)80022-4
- Hayes, S. C., Niccolls, R., Masuda, A., & Rye, A. K. (2002). Prejudice, terrorism, and behavior therapy. *Cognitive and Behavioral Practice*, 9(4), 296–301.
doi:10.1016/S1077-7229(02)80023-2
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). *Acceptance and commitment therapy: An experiential approach to behavioral change*. New York, NY: Guilford.

- Hayes, S. C., Wilson, K. G., Gifford, E. V., Follette, V. M., & Strosahl, K. (1996). Experimental avoidance and behavioral disorders: a functional dimensional approach to diagnosis and treatment. *Journal of Consulting and Clinical Psychology, 64*(6), 1152–1168. Retrieved from <http://www.ncbi.nlm.nih.gov>
- Herek, G. M. (1986). On heterosexual masculinity: Some psychical consequences of the social construction of gender and sexuality. *American Behavioral Scientist, 29*(5), 563–577. doi:10.1177/000276486029005005
- Herek, G. M. (2000). The Psychology of sexual prejudice. *Current Directions in Psychological Science, 9*(1), 19–22. doi:10.1111/1467-8721.00051
- Herek, G. M. (2004). Beyond “Homophobia”: Thinking about sexual prejudice and stigma in the twenty-first century. *Sexuality Research and Social Policy, 1*(2), 6–24. doi:10.1525/srsp.2004.1.2.6
- Herek, G. (2007). Confronting sexual stigma and prejudice: Theory and practice. *Journal of Social Issues, 63*(4), 905–925. doi:10.1111/j.1540-4560.2007.00544.x
- Hudson, W. W., & Ricketts, W. A. (1980). A strategy for the measurement of homophobia. *Journal of Homosexuality, 5*(4), 357-372. doi:10.1300/J082v05n04_02
- Hunter, S., Shannon, C., Knox, J., & Martin, J. I. (1998). *Lesbian, gay, and bisexual youths and adults: Knowledge for human services practice*. Thousand Oaks, Ca: Sage.
- Johnson, M. E., Brems, C., & Alford-Keating, P. (1997). Personality correlates of homophobia. *Journal of Homosexuality, 34*(1), 57–69. doi:10.1300/J082v34n01_05
- Kabat-Zinn, J. (1982). An outpatient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation: Theoretical considerations and preliminary. *General Hospital Psychiatry, 4*, 33–47. doi:10.1016/0163-8343(82)90026-3

- Kabat-Zinn, J. (1990). *Full catastrophe living*. New York, NY: Bantam Dell.
- Kabat-Zinn, J. (1994). *Wherever you go, there you are: Mindfulness meditation in everyday life*. New York, NY: Hyperion.
- Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past present and future. *Clinical Psychology: Science and Practice, 10*(2), 144–156. doi:10.1093/clipsy.bpg016
- Kabat-Zinn, J. (2011). Some reflections on the origins of MBSR, skillful means, and the trouble with maps. *Contemporary Buddhism, 12*(1), 281–306.
doi:10.1080/14639947.2011.564844
- Kabat-Zinn, J., Massion, A. O., Kristeller, J., Peterson, L. G., Fletcher, K. E., Pbert, . . . Santorelli, S. F. (1992). Effectiveness of a meditation-based stress reduction program in the treatment of anxiety disorders. *American Journal of Psychiatry, 149*(7), 936–943.
Retrieved from <http://www.fammed.wisc.edu/sites/default/files/webfm-uploads/documents/outreach/mindfulness/res-mindfulness-anxiety.pdf>
- Kang, C., & Whittingham, K. (2010). Mindfulness: A Dialogue between Buddhism and clinical psychology. *Mindfulness, 1*(3), 161–173. doi:10.1007/s12671-010-0018-1
- Kearney, D. J., McDermott, K., Malte, C., Martinez, M., & Simpson, T. L. (2012). Association of participation in a mindfulness program with measures of PTSD, depression and quality of life in a veteran sample. *Journal of Clinical Psychology, 68*(1), 101–116.
doi:10.1002/jclp.20853
- Keng, S.-L., Smoski, M. J., & Robins, C. J. (2011). Effects of mindfulness on psychological health: a review of empirical studies. *Clinical Psychology Review, 31*(6), 1041–1056.
doi:10.1016/j.cpr.2011.04.006
- King, M., Semlyen, J., Tai, S. S., Killaspy, H., Osborn, D., Popelyuk, D., & Nazareth, I. (2008).

- A systematic review of mental disorder, suicide, and deliberate self harm in lesbian, gay and bisexual people. *BMC Psychiatry*, 8, 70. doi:10.1186/1471-244X-8-70
- Klimecki, O., Leiberg, S., Lamm, C., & Singer, T. (2012). Functional neural plasticity and associated changes in positive affect after compassion training. *Cerebral Cortex*, 23(7), 1552-1561. doi:10.1093/cercor/bhs142
- Knapp, H., & Kirk, S. A. (2003). Using pencil and paper, internet and touch-tone phones for self-administered surveys: Does methodology matter? *Computers in Human Behavior*, 19, 117-134. doi:10.1016/s0747-5632(02)00008-0
- Krasner, M., Epstein, R., Beckman, H., Suchman, A., Chapman, B., Mooney, C., & Quill, T. (2009). Association of an educational program in mindful communication with burnout, empathy, and attitudes among primary care physicians. *Journal of the American Medical Association*, 302, 1284–1293. doi:10.1001/jama.2009.1384
- Kumar, S., Feldman, G., & Hayes, A. (2008). Changes in mindfulness and emotion regulation in an exposure-based cognitive therapy for Depression. *Cognitive Therapy and Research*, 32(6), 734–744. doi:10.1007/s10608-008-9190-1
- Kuyken, W., Byford, S., Taylor, R. S., Watkins, E., Holden, E., White, ... Teasdale, J. (2008). Mindfulness-based cognitive therapy to prevent relapse in recurrent depression. *Journal of Consulting and Clinical Psychology*, 76(6), 966–978. doi:10.1037/a0013786
- Langer, E. J. (1989). *Mindfulness*. Reading, MA: Addison-Wesley.
- Langer, E. J., Bashner, R. S., & Chanowitz, B. (1985). Decreasing prejudice by increasing discrimination. *Journal of Personality and Social Psychology*, 49(1), 113–120. Retrieved from <http://www.ncbi.nlm.nih.gov>

- Langer, E. J., & Imber, L. (1980). Role of mindlessness in the perception of deviance. *Journal of Personality and Social Psychology*, 39(3), 360–367. doi:10.1037/0022-3514.39.3.360
- Levitt, E. E., & Klassen, A. D. (1974). Public attitudes toward homosexuality: Part of the 1970 national survey by the Institute for Sex Research. *Journal of Homosexuality*, 1(1), 29–43. doi:10.1300/J082v01n01_03
- Lillis, J., & Hayes, S. C. (2007). Applying acceptance, mindfulness, and values to the reduction of prejudice: A pilot study. *Behavior Modification*, 31(4), 389–411. doi:10.1177/0145445506298413
- Linehan, M. M. (1993). *Cognitive-behavioral treatment of borderline personality disorder*. New York, NY: Guilford Press.
- Malyon, A. (1982). Psychotherapeutic implications of internalized homophobia. In J. C. Gonsiorek (Ed.), *Homosexuality and psychotherapy: A handbook of affirmative models* (pp. 59–69). New York, NY: Haworth.
- Marlatt, G. A., & Kristeller, J. L. (1999). Mindfulness and meditation. In W. R. Miller (Ed.), *Integrating Spirituality in Treatment*. (pp.67-84). Washington, DC: American Psychological Association Books.
- Masuda, A., Hayes, S. C., Fletcher, L. B., Seignourel, P. J., Bunting, K., Herbst, . . . Lillis, J. (2007). Impact of acceptance and commitment therapy versus education on stigma toward people with psychological disorders. *Behaviour Research and Therapy*, 45(11), 2764–2772. doi:10.1016/j.brat.2007.05.008
- McCann, P. D., Minichiello, V., & Plummer, D. (2009). Is homophobia inevitable?: Evidence that explores the constructed nature of homophobia, and the techniques through which men unlearn it. *Journal of Sociology*, 45(2), 201–220. doi:10.1177/1440783309103347

- Meier, B. P., Robinson, M. D., Gaither, G. A., & Heinert, N. J. (2006). A secret attraction or defensive loathing? Homophobia, defense, and implicit cognition. *Journal of Research in Personality, 40*(4), 377–394. doi:10.1016/j.jrp.2005.01.007
- Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin, 129*(5), 674-697. doi:10.1037/0033-2909.129.5.674
- National Association for the Research and Therapy of Homosexuality. (n.d.). NARTH position statements. *NARTH.com*. Retrieved August 13, 2012, from <http://www.narth.com/menus/positionstatements.html>
- Neff, K. (2004). Self-compassion and psychological well-being. *Constructivism in the Human Sciences, 9*(2), 27–37. Retrieved from <http://self-compassion.org>
- Neff, K. D. (2009). The role of self-compassion in development: A healthier way to relate to oneself. *Human Development, 52*(4), 211–214. doi:10.1159/000215071
- O’Donohue, W. T., & Caselles, C. E. (1993). Homophobia: Conceptual, definitional, and value issues. *Journal of Psychopathology and Behavioral Assessment, 15*, 177–195.
- Orr, D. (2002). The uses of mindfulness in anti-oppressive pedagogies: Philosophy and praxis. *Canadian Journal of Education, 27*(4), 477 – 490. doi:10.2307/1602246
- Parrott, D. J., Adams, H. E., & Zeichner, A. (2002). Homophobia: Personality and attitudinal correlates. *Personality and Individual Differences, 32*(7), 1269–1278. doi:10.1016/S0191-8869(01)00117-9
- Pettit, F. A. (2002). A comparison of World-Wide Web and paper-and-pencil personality questionnaires. *Behavioral Research Methods, Instruments, & Computers, 34*, 50-54. doi:10.3758/BF03195423

- Piet, J., Hougaard, E., Hecksher, M. S., & Rosenberg, N. K. (2010). A randomized pilot study of mindfulness-based cognitive therapy and group cognitive-behavioral therapy for young adults with social phobia. *Scandinavian Journal of Psychology*, 51(5), 403–410. doi:10.1111/j.1467-9450.2009.00801.x
- Pleck, J. H. (1981). *The Myth of Masculinity*. Cambridge, MA: Massachusetts Institute of Technology Press.
- Plummer, D. (2001). Policing manhood : New theories about the social significance. In C. Wood (Ed.), *Sexual positions: An Australian View* (Vol. 75, pp. 60–75). Melbourne: Hill of Content.
- Plummer, K. (1975). *Sexual stigma: An interactionist account*. Boston, MA: Routledge & Kegan Paul.
- Pollak, S., Pedulla, T., & Siegel, R. D. (2014). *Sitting together: Essential skills for mindfulness-based psychotherapy*. New York, NY: Guilford Press
- Segal, Z. V., Williams, J. M. G., & Teasdale, J. D. (2002). *Mindfulness-based cognitive therapy for depression - A new approach to preventing relapse*. New York, NY: Guilford Press.
- Shapiro, S. L., Carlson, L. E., Astin, J. A., & Freedman, B. (2006). Mechanisms of mindfulness. *Journal of Clinical Psychology*, 62(3), 373–386. doi:10.1002/jclp
- Shapiro, S. L., Schwartz, G. E., & Bonner, G. (1998). Effects of mindfulness-based stress reduction on medical and premedical students. *Journal of Behavioral Medicine*, 21(6), 581–599. Retrieved from <http://www.ncbi.nlm.nih.gov>
- Snively, C. A., Stretch, J. J., & Chadha, J. (2004). Understanding homophobia : Preparing for practice realities in urban and rural settings. *Journal of Gay & Lesbian Social Services*, 17(1), 59–82. doi:10.1300/J041v17n01_05 59

- Sussal, C. M. (1998). A Kleinian analysis of homophobia. *Smith College Studies in Social Work*, 68(2), 203–214.
- Thornton, J. A., & Wahl, O. F. (1998). Impact of a newspaper article on attitudes toward mental illness. *Journal of Community Psychology*, 24(1), 17–25.
doi:10.1002/(SICI)1520-6629(199601)24:1
- Truell, A. D., Bartlett, J. E., & Alexander, M. W. (2002). Response rate, speed and completeness: A comparison of Internet-based and mail surveys. *Behavioral Research Methods, Instruments, & Computers*, 34, 46-49. doi: 10.3758/BF03195422
- Van Dam, N. T., Sheppard, S. C., Forsyth, J. P., & Earleywine, M. (2011). Self-compassion is a better predictor than mindfulness of symptom severity and quality of life in mixed anxiety and depression. *Journal of Anxiety Disorders*, 25(1), 123–30.
doi:10.1016/j.janxdis.2010.08.011
- Weinberg, G. (1973). *Society and the healthy homosexual*. New York, NY: Anchor Press.
- Williams, J. M. G., Alatiq, Y., Crane, C., Barnhofer, T., Fennell, M., Duggan, D., ... Goodwin, G. M. (2008). Mindfulness-based cognitive therapy (MBCT) in bipolar disorder: Preliminary evaluation of immediate effects on between-episode functioning. *Journal of Affective Disorders*, 107(1-3), 275–279.
- Williams, J. M. G., & Kabat-Zinn, J. (2011). Mindfulness: Diverse perspectives on its meaning, origins, and multiple applications at the intersection of science and dharma. *Contemporary Buddhism*, 12(01), 1-18. Doi: 10.1080/14639947.2011.564811

- Wright, L. W., Adams, H. E., & Bemat, J. (1999). Development and validation of the homophobia scale. *Journal of Psychopathology and Behavioral Assessment*, 21(4), 1–3. doi:10.1023/A:1022172816258
- Wood, E., Nosko, A., Desmarais, S., Ross, C., & Irvine, C. (2006). Online and traditional paper-and-pencil survey administration: Examining experimenter presence, sensitive material and long surveys. *The Canadian Journal of Human Sexuality*, 15(3), 147-155. Retrieved from <http://www.utpjournals.com/Canadian-Journal-of-Human-Sexuality>
- Zylowska, L., Ackerman, D. L., Yang, M. H., Futrell, J. L., Horton, N. L., Hale, T. S., . . . Smalley, S. L. (2008). Mindfulness meditation training in adults and adolescents with ADHD: A feasibility study. *Psychosomatic Medicine*, 11(6), 737–746. doi:10.1177/1087054707308502

APPENDIX A
INFORMED CONSENT

Informed Consent

You are invited to participate in this research study, which is being conducted through Indiana University of Pennsylvania. The following information is provided in order to help you to make an informed decision about whether or not to participate.

The purpose of this study is to investigate the relationships between mindfulness, empathy, and attitudes towards homosexuality. Participation in this study involves completing several measures (tests). Participation entails no known risk. Your responses on the survey will remain confidential. Your participation in this study should require approximately 60 minutes. You will receive research participation credit for your participation in this study.

Your participation in this study is voluntary. You are free to decide not to participate in this study or to withdraw at any time without adversely affecting your relationship with the investigator(s), with IUP, or your psychology professor. If you choose to participate, you may withdraw at any time by clicking on the “Withdraw” button in the top right corner of each page. The information obtained in this study may be published in scientific journals or presented at scientific meetings but your identity will always be kept strictly confidential and your responses will not be connected to your name.

To obtain further information please contact:

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This project has been approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone: 724-357-7730).

APPENDIX B
THE HOMOPHOBIA SCALE

THS

This questionnaire is designed to measure your thoughts, feelings, and behaviors with regard to homosexuality. It is not a test, so there are no right or wrong answers. Answer each item by circling the number after each question as follows:

1	2	3	4	5
Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree

- | | | | | | |
|---|---|---|---|---|---|
| 1. Gay people make me nervous. | 1 | 2 | 3 | 4 | 5 |
| 2. Gay people deserve what they get. | 1 | 2 | 3 | 4 | 5 |
| 3. Homosexuality is acceptable to me. | 1 | 2 | 3 | 4 | 5 |
| 4. If I discovered a friend was gay I would end the friendship. | 1 | 2 | 3 | 4 | 5 |
| 5. I think homosexual people should not work with children. | 1 | 2 | 3 | 4 | 5 |
| 6. I make derogatory remarks about gay people. | 1 | 2 | 3 | 4 | 5 |
| 7. I enjoy the company of gay people. | 1 | 2 | 3 | 4 | 5 |
| 8. Marriage between homosexual individuals is acceptable. | 1 | 2 | 3 | 4 | 5 |
| 9. I make derogatory remarks like "faggot" or "queer"
to people I suspect are gay. | 1 | 2 | 3 | 4 | 5 |
| 10. It does not matter to me whether my friends are gay
or straight. | 1 | 2 | 3 | 4 | 5 |

1	2	3	4	5
Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree

11. It would not upset me if I learned that a close friend was homosexual.	1	2	3	4	5
12. Homosexuality is immoral.	1	2	3	4	5
13. I tease and make jokes about gay people.	1	2	3	4	5
14. I feel that you cannot trust a person who is homosexual.	1	2	3	4	5
15. I fear homosexual persons will make sexual advances towards me.	1	2	3	4	5
16. Organizations which promote gay rights are necessary.	1	2	3	4	5
17. I have damaged property of gay persons, such as "keying" their cars.	1	2	3	4	5
18. I would feel comfortable having a gay roommate.	1	2	3	4	5
19. I would hit a homosexual for coming on to me.	1	2	3	4	5
20. Homosexual behavior should not be against the law.	1	2	3	4	5
21. I avoid gay individuals.	1	2	3	4	5
22. It does not bother me to see two homosexual people together in public.	1	2	3	4	5
23. When I see a gay person I think, "What a waste."	1	2	3	4	5

1	2	3	4	5
Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree

24. When I meet someone I try to find out if he/she is gay. 1 2 3 4 5

25. I have rocky relationships with people that I 1 2 3 4 5
suspect are gay.

APPENDIX C

INTERPERSONAL REACTIVITY INDEX

IRI

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate rating using the following scale. When you have decided on your answer, fill in the number next to the statement. **READ EACH ITEM CAREFULLY BEFORE RESPONDING.** Answer as honestly as you can. Thank you.

1	2	3	4	5
Does not describe me well				Describes me very well

Note: The value of the scale reverses from the previous measure, so higher numbers indicate stronger agreement.

- _____ 1. I daydream and fantasize, with some regularity, about things that might happen to me.
- _____ 2. I often have tender, concerned feelings for people less fortunate than me.
- _____ 3. I sometimes find it difficult to see things from the “other guy’s” point of view.
- _____ 4. Sometimes I don’t feel very sorry for other people when they are having problems.
- _____ 5. I really get involved with the feelings of characters in a novel.
- _____ 6. In emergency situations, I feel apprehensive and ill-at-ease.
- _____ 7. I am usually objective when I watch a movie or play, and I don’t often get completely caught up in it.
- _____ 8. I try to look at everybody’s side of a disagreement before I make a decision.
- _____ 9. When I see someone being taken advantage of, I feel kind of protective towards them.
- _____ 10. I sometimes feel helpless when I am in the middle of a very emotional situation.
- _____ 11. I sometimes try to understand my friends better by imagining how things look from their perspective.

1	2	3	4	5
Does not describe me well				Describes me very well

- _____ 12. Becoming extremely involved in a good book or movie is somewhat rare for me.
- _____ 13. When I see someone get hurt, I tend to remain calm.
- _____ 14. Other people's misfortunes do not usually disturb me a great deal.
- _____ 15. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.
- _____ 16. After seeing a play or a movie, I have felt as though I were one of the characters.
- _____ 17. Being in tense emotional situations scares me.
- _____ 18. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.
- _____ 19. I am usually pretty effective in dealing with emergencies.
- _____ 20. I am often quite touched by things that I see happen.
- _____ 21. I believe that there are two sides to every question and try to look at them both.
- _____ 22. I would describe myself as a pretty soft-hearted person.
- _____ 23. When I watch a good movie, I can very easily put myself in the place of a leading character.
- _____ 24. I tend to lose control during emergencies.
- _____ 25. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.
- _____ 26. When I am reading an interesting story or novel, I imagine how *I* would feel if the events in the story were happening to me.

1	2	3	4	5
Does not describe me well				Describes me very well

_____ 27. When I see someone who badly needs help in an emergency, I go to pieces.

_____ 28. Before criticizing somebody, I try to imagine how *I* would feel if I were in their place.

APPENDIX D

FIVE FACET MINDFULNESS QUESTIONNAIRE

5-FACET MINDFULNESS QUESTIONNAIRE

Please rate each of the following statements using the scale provided. Write the number in the blank that best describes your own opinion of what is generally true for you.

1	2	3	4	5
never or very rarely true	rarely true	sometimes true	often true	very often or always true

- _____ 1. When I'm walking, I deliberately notice the sensations of my body moving.
- _____ 2. I'm good at finding words to describe my feelings.
- _____ 3. I criticize myself for having irrational or inappropriate emotions.
- _____ 4. I perceive my feelings and emotions without having to react to them.
- _____ 5. When I do things, my mind wanders off and I'm easily distracted.
- _____ 6. When I take a shower or bath, I stay alert to the sensations of water on my body.
- _____ 7. I can easily put my beliefs, opinions, and expectations into words.
- _____ 8. I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted.
- _____ 9. I watch my feelings without getting lost in them.
- _____ 10. I tell myself I shouldn't be feeling the way I'm feeling.
- _____ 11. I notice how foods and drinks affect my thoughts, bodily sensations, and emotions.
- _____ 12. It's hard for me to find the words to describe what I'm thinking.
- _____ 13. I am easily distracted.
- _____ 14. I believe some of my thoughts are abnormal or bad and I shouldn't think that way.

1	2	3	4	5
never or very rarely true	rarely true	sometimes true	often true	very often or always true

- _____ 15. I pay attention to sensations, such as the wind in my hair or sun on my face.
- _____ 16. I have trouble thinking of the right words to express how I feel about things
- _____ 17. I make judgments about whether my thoughts are good or bad.
- _____ 18. I find it difficult to stay focused on what's happening in the present.
- _____ 19. When I have distressing thoughts or images, I "step back" and am aware of the thought or image without getting taken over by it.
- _____ 20. I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.
- _____ 21. In difficult situations, I can pause without immediately reacting.
- _____ 22. When I have a sensation in my body, it's difficult for me to describe it because I can't find the right words.
- _____ 23. It seems I am "running on automatic" without much awareness of what I'm doing.
- _____ 24. When I have distressing thoughts or images, I feel calm soon after.
- _____ 25. I tell myself that I shouldn't be thinking the way I'm thinking.
- _____ 26. I notice the smells and aromas of things.
- _____ 27. Even when I'm feeling terribly upset, I can find a way to put it into words.
- _____ 28. I rush through activities without being really attentive to them.
- _____ 29. When I have distressing thoughts or images I am able just to notice them without reacting.
- _____ 30. I think some of my emotions are bad or inappropriate and I shouldn't feel them.

1	2	3	4	5
never or very rarely true	rarely true	sometimes true	often true	very often or always true

_____ 31. I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow.

_____ 32. My natural tendency is to put my experiences into words.

_____ 33. When I have distressing thoughts or images, I just notice them and let them go.

_____ 34. I do jobs or tasks automatically without being aware of what I'm doing.

_____ 35. When I have distressing thoughts or images, I judge myself as good or bad, depending what the thought/image is about.

_____ 36. I pay attention to how my emotions affect my thoughts and behavior.

_____ 37. I can usually describe how I feel at the moment in considerable detail.

_____ 38. I find myself doing things without paying attention.

_____ 39. I disapprove of myself when I have irrational ideas.

APPENDIX E
DEMOGRAPHIC QUESTIONNAIRE

Please answer the following questions:

1. Age:
 - a. 18
 - b. 19
 - c. 20
 - d. 21
 - e. 22
 - f. 23
 - g. 24 or older

2. Please select the choice that best fits your biological sex:
 - a. Female
 - b. Male
 - c. Intersex (A person with some combination of both male and female of genitalia)
 - d. F to M: Male (A person who has biologically transitioned from female to male)
 - e. M to F: Female (A person who has biologically transitioned from male to female)

3. Please select the choice that best fits your gender identity:
 - a. Female
 - b. Male
 - c. Transsexual (One's internal sense of their gender does not match their physical body)
 - d. Other (e.g. Genderqueer, two-spirit, Pangender, Cisgender)

4. Please select the choice that best fits your sexual orientation:
 - a. Heterosexual
 - b. Homosexual/Gay male
 - c. Homosexual/Lesbian female
 - d. Bisexual (Attracted to men and women)
 - e. Pansexual (Attracted to all variants of gender)
 - f. Other

5. Please select what you consider to be your race:
 - a. Asian/Asian American/Pacific Islander
 - b. Black/African/African American/Black American
 - c. Hispanic/Latino(a)/Spanish/Hispanic American/Latino(a) American
 - d. Native American/Alaska Native
 - e. White American/Caucasian (non-Hispanic)
 - f. Biracial
 - g. Other

6. Year in school:
 - a. Freshman
 - b. Sophomore
 - c. Junior
 - d. Senior
 - e. Graduate

7. Have you ever had formal or informal training in mindfulness or mindful-meditation?
 - a. No
 - b. Yes

APPENDIX F
DEBRIEFING FORM

Debriefing Form

The Associations Among Mindfulness, Homophobia, and Empathy

Thank you for your participation in this study.

At the beginning of this study, you were informed that the purpose of the study is to investigate the relationship between mindfulness, empathy, and attitudes towards homosexuality. The actual focus of this study is to examine the relationship between the constructs of empathy and mindfulness and the construct of *homophobia*. Homophobia is a term and a concept that can evoke a wide range of emotions from individuals, sometime resulting in harm to others or oneself. The purpose of conducting this study is to explore potential avenues for reducing homophobia. It is my sincere hope that you can feel proud to have participated in this endeavor.

Because the term “homophobia” has many powerful and negative connotations in our culture, it was intentionally excluded from the study in order to minimize the chances that participants would change their survey responses based on exposure to the term and subsequent emotional reactions. By framing this study as an examination of attitudes towards homosexuality (rather than an examination of homophobia), it is hoped that participants would be less hesitant to provide honest responses.

All of the information disclosed by participant during this study will be kept confidential. If you have any questions or would like further information about this study, including the results when the study has been completed, please contact the following individuals:

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