

ABSTRACT

JAEGER, REBEKAH ANNE. Eating Attitudes and Behaviors in Males Engaging in or Attracted to Same Sex Sexual Behaviors. (Under the direction of Stanley Baker).

The question the current research attempted to answer was, are there differences in the eating behaviors of non-heterosexual males in different stages of gay identity formation? The goal of this research was to identify if non-heterosexual males were at a higher risk of eating disordered behaviors depending on their stage level of gay identity development. The hypotheses predicted that persons in lower levels of identity development would exhibit more eating disordered behaviors than those in higher stages.

The research populations included in the study were self-identified non-heterosexual males which included three categories: gay, bisexual and other males. Gay and bisexual males were defined by, males who are attracted to other males and/or engage in same sex sexual behaviors. Other was defined as males who did not self-label themselves as gay or bisexual but had sexual feelings or thoughts toward members of the same biological sex or engaged in sexual behaviors with members of the same biological sex. Persons who were members of the North Carolina State University (NCSU), Gay, Lesbian, Bi-sexual and Transgender Center list serve, Facebook, and Twitter had the opportunity to participate in the research. The sample included 142 participants who completed the Eating Attitudes Test – 26 (EAT-26), Mizes Anorectic Cognitions Revised (MAC-R) and Gay Identity Questionnaire (GIQ).

The EAT–26 is the most widely used measure of the symptoms and concerns characteristic of eating disorders but does not yield an eating disorder diagnosis. The MAC-

R is used to assess eating cognitions and is frequently used to assess changes in patients eating behaviors after cognitive treatment.

The results of the current study showed that there was a significant relationship between participants MAC – R score and their level of identity development. There was no significant relationship between participants EAT 26 score and identity stage level or mean appearance score. Although the MAC – R and EAT 26 scores were correlated, the MAC – R assess eating disordered cognitions in more depth whereas the EAT- 26 is used as a brief self-assessment tool, not a diagnostic instrument. Cognitive changes are integral in both treating eating disorders and attaining a positive GLBT identity which may account for the differences between participants EAT – 26 scores and MAC – R scores.

All research studies have limitations that can impact the significance of the findings and the generalizability of the results. A limitation in GLBT identity theories is poor research design which affects the development of new identity theories. The lack of strong theories forces investigators to either develop their own, or use ones that are flawed. One limitation of the current study stems from using an outdated, flawed theory to identify participants GLBT identity stage. Despite the limitation three groups of participants emerged, suggesting that gay identity development occurs in fewer stages than previously believed. The results also suggest that as non-heterosexual males immerse themselves into gay culture, eating disordered behavior increases. Once they move into the later stage, their disordered eating behaviors decrease. Other limitations of the current research include participant characteristics, sample size, instrumentation and the nature of studying sexuality.

To diminish the limitations more research is needed surrounding males and eating disorder diagnosis and treatment, as well as the impact sexual orientation has on eating

disorders. Increasing the number of participants in early identity stages would increase generalizability of results. It is difficult to find participants in early stages of GLBT identity development. A solution could be to allow all persons, including those who identify as heterosexual to complete the GIQ. This may increase the number of persons who are still coming to terms with their sexuality, without them having to “come out”.

Eating Attitudes and Behaviors in Males Engaging in or
Attracted to Same Sex Sexual Behaviors

by
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DEDICATION

This work is dedicated to all of my family members who are members of the GLBT community who have taught me how important it is to stand up and speak loudly for others who have no voice of their own.

BIOGRAPHY

I have never been very good at writing about myself, in fact I may argue that writing in and of itself has always been a struggle for me. Creative writing never posed a challenge, technical writing, including proper grammar however, has often eluded me. One reason is because I to write like I speak, fast paced, chocked full of ideas but lacking the connections I see in my head but have trouble putting onto paper. ADHD has played a large role in my struggle with writing.

My brain often feels as if it is going at lightning speed, racing after the next thought before it could finish the first. I was never the “straight A” student, easily bored, distracted and looked over I easily blended into the background, ignored by many teachers because I was quiet and caused no disruption in the classroom. Looking back I doubt any of them would guess how much I have accomplished both academically and personally. Even though I never felt engaged in the classroom I loved learning and spent a large portion of my childhood reading. For some reason, one I still can’t explain I always wanted to complete a PhD program and although I didn’t always academically achieve the level I could have if my ADHD had been addressed as a child, I have never given up on that dream.

Over the past few years I have dealt with job changes, moving back home, suicide, death of a family member, divorce and numerous other problems. Somehow, as scattered as it may have been at times, I completed the longest written project I have ever attempted. My interest in GLBT issues stems from the struggles my many family members have and still continue to face. Eating disorders is one of the common struggles many gay males combat. As someone who has fought through their own battle with an eating disorder, my interest in

helping one of the most currently disenfranchised population grew. In the future I hope to continue my work with the GLBT population and address not only eating disorders or coming out but the inequalities they face from society on a daily basis.

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Thank you to NCSU GLBT Center advisory board whose job offer gave me the amazing opportunity to work with GLBT students. Thank you to my boss, Justine, who has taught me what it means to be dedicated to a cause. To Matt who talked me down from the edge too many times to count and has shown me how much one person is capable of changing. Thank you to Luke and Maddy who taught me more than I could ever express

about transgender concerns, as well as crocheting and knitting. To Tres, blueberries, beach and random road trips kept me going, and to Billy whose dancing in ballet class led to our Cabaret performance. To Julian who worked tirelessly to start an amazing tradition on campus and again showed me how much one student can accomplish. Thank you to all of the GLBT students I have had the pleasure of working with, both as a high school counselor and while working at NCSU's GLBT Center.

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CHAPTER 1

Introduction

Imagine a person who has an eating disorder. Most likely, the images that come to mind include a waif like girl, timid, vulnerable, sickly, and weak. Eating disorders have been seen as a problem only effecting vulnerable females by the public and professionals in the medical field. This stereotype has caused professional research to focus almost exclusively on females. Do eating disorders occur only in females? The answer is no.

Bulimia nervosa and anorexia nervosa are diseases that affect millions of Americans. Estimates of persons with bulimia and anorexia range from six to 10 % of the overall population of the United States (Rader Programs, 2008). Statistics show that eating disorders may be more common in women, however, do not exclusively exist in women. Men may have a lower risk of eating disorders diagnoses, but the prevalence of males with eating disorders continues to rise. In the 1980's and 1990's it was believed that for every 10 to 15 females who had eating disorders, only one male had an eating disorder. More recent statistics are showing drastic changes (Renfrew, 2008); (Weisensee, 2009); (Vito, 2009).

Prevalence of Eating Disorders in Males

Over one million males are diagnosed with anorexia each year. Statistics from the beginning of the millennium showed rates of anorexia in males to be higher than expected. In the year 2000, 10 % of persons with anorexia nervosa were male. The rate in 2000 was approaching two million a year (Crosscope-Happel, 2000). According to the National Association of Anorexia and Associated Disorders (ANAD, 2009) 10 to 15% of persons diagnosed with eating disorders are male. ANAD also notes that males suffer from anorexia

more frequently than bulimia. ANAD (2009) reported that in 2001 for every four females who were anorexic, one male was and for every eight to 11 females with bulimia, one male was bulimic.

The National Eating Disorder Association (NEDA, 2009) and Rader (2008) treatment programs note that approximately 24 million people in the United States have an eating disorder. If ANAD's statistics were correct, between 10 to 15 % of the 24 million people with eating disorder would be males. Although statistics show that males with eating disorders not only exist and the prevalence of eating disorders is higher than expected, little information about men with eating disorders exists in the literature.

Rationale

Need. A problem for professionals working with male eating disorder clients is limited resources. Professionals are limited to using female-based research and treatments with males who may not develop eating disorders for the same reason as females nor respond to the same types of treatment interventions. Successful treatment outcomes are difficult to achieve with female eating disorder clients even though there is a large amount of literature on the topic. Using treatment methods that are normed for females on males may greatly reduce positive treatment outcomes. It seems unwise to generalize eating disorder information based on females to males, especially since eating disorders often cause serious health complications when left untreated.

Eating disorders are a serious issue due to the health complications that can occur from anorexia and bulimia. Anorexia and bulimia are two of the deadliest mental illnesses, with a death rate of approximately 10 %. Anorexia has severe health consequences that are

quite specific in comparison to bulimia, including cardiac arrest and starvation. Both starvation and cardiac arrest can lead to death when an anorexic is not being treated. Bulimia's health consequences occur from purging and can be severe depending on the frequency of vomiting. Most often, swelling of the stomach and the pancreas, tooth decay, gum disease, inflammation of the esophagus and enlarged salivary glands occur. More severe consequences are abnormal heart rhythms, muscle spasms, and paralysis can occur from the depletion of water and potassium in body tissues. In the worst cases, these problems can cause death. Suicidal depression is also often linked with bulimia. Considering the severe effects eating disorders can have it seems unethical to continue to exclude males from eating disorder research.

Males and Eating Disorders

Types of eating disorders in males. Limited research states that three types of eating disorders are most common in males: anorexia nervosa, bulimia nervosa, and binge eating (Males and Ed, 2009). The two types of eating disorders this study will address are bulimia nervosa and anorexia nervosa.

Anorexia Nervosa. According to the Diagnostic and Statistical Handbook for Mental Disorders (DSM IV) (American Psychiatric Association, 1994) and the National Eating Disorder Association (NEDA, 2009) anorexia nervosa is defined by four criteria. The first criterion is a refusal to maintain a body weight, which is at or above a minimally normal weight for height, body type, and age. The second criterion is a refusal to maintain a weight of more than 85% of one's expected body weight. Third, persons with anorexia have an intense fear of gaining weight, and feel they are overweight even when faced with extreme

weight loss. The fourth symptom is a loss of menstrual period in women who have begun menses with at least three menstrual periods missing (American Psychiatric Association, 1994); (NEDA, 2009).

Bulimia Nervosa. Bulimia nervosa has three main diagnostic criteria. The first criterion includes eating large amounts of food in a short period (often referred to as bingeing). Bingeing occurs secretly, and persons engage in bingeing without feeling hunger or fullness and results in feelings of being out of control. The second criterion is a response to bingeing to compensate for consuming a large amount of food. Compensatory behaviors can include self-induced vomiting, laxative or diuretic abuse, fasting and obsessive exercise. Lastly, there is an extreme concern, which revolves around body weight and shape (American Psychiatric Association, 1994); (NEDA, 2009).

Difficulties in diagnosing males. One of the main problems men face in being diagnosed and receiving treatment for eating disorders is misdiagnosis. Many physicians and counselors still hold to the false assumption that only women are plagued with eating disorders. Physicians' often look for other causes of weight loss in male patients before ever considering an eating disorder. The diagnostic criteria illustrate one reason why males are overlooked or misdiagnosed by physicians for eating disorders.

Hormones and diagnostics in females and males. The loss of one's menstrual cycle is often the first alert to a physician that a female patient may be anorexic (Rader, 2009). The current diagnostic criteria do not fit males since it is obvious that males do not menstruate. Similarly, it is harder for males to be at a weight low enough to classify them as anorexic due to the differences between muscle mass in male and female bodies. Men are often not at the

critical low body weight needed for a clinical diagnosis, yet they may engage in disordered eating habits (O’dea, 2002). It is important for physicians to be aware that males can have a different hormonal side effect occur if they have an eating disorder. A hormonal side effect for men with eating disorders is a decrease in testosterone levels, along with a decrease in sexual libido. Males may not report this change due to shame and embarrassment (Elliot, 2001).

Biological impacts on diagnostics in males. One biological difference noted between males and females that relates to the lower percentage of males diagnosed with eating disorders is the body fat ratio. Biologically, males have a lower percentage of body fat than women. Males have more muscle tissue and less fat than females. Body weights of males may never reach a low enough level to for them to be diagnosed as anorexic. Another biological difference between males and females is a difference in metabolic rates.

Males have higher metabolisms, enabling them to consume larger amounts of food, which contributes to physicians overlooking men with eating disorders. Professionals overlook bulimia and binge eating disorder in males due the belief that males need to eat more and it is more acceptable for men to overeat than for females (ANAD, 2009). On average, it takes twice as long for a male to be diagnosed with an eating disorder then it does for a female, causing side effects of the disorder to become more critical (Rader, 2009).

Underreporting of eating disorders. Another problem that effects’ diagnosing eating disorders in males is males frequently under report their eating problems. In general, eating disorders are often under reported due to the hidden nature of the disorder. Males and females who have eating disorders often try to hide their eating behaviors from others. One

other reason males try to hide their disorder is they fear physicians and others may assume that they are gay since they may not fit the traditional male stereotypes.

Males diagnosed with eating disorders often do not display the typical male stereotypes. They are more passive and have often had negative reactions to their weight previously. They are more dependent and often have more avoidant personalities than males without eating disorders. Most males with anorexia do not conform to the general expectations for masculinity such as being competitive, strong, physically aggressive or independent (Males: Eating Disorders, 2008). A small amount of eating disorder research incorporating male participants found that gay males are more likely than heterosexual males to have eating disorders (NEDA, 2009). Many men would be reluctant to self-disclose if they believed that only “gay” men had the disorder (Crosscope-Happel, 2000).

The misdiagnosis and under diagnosis of eating disorders in men helps to keep the stereotype continuing that eating disorders are exclusively a female problem (Eliot, 2001). It is important to note that reported levels of incidence may be lower than the actual rate of the disorders, due to the likelihood that people suffering from them often keep their circumstances hidden (NEDA, 2009). Researchers believe that male prevalence rates are higher than reported because males often underreport eating disorder symptoms.

Gaps in the Research Literature

Many areas need to be researched involving males and eating disorders in the literature. There is a lack of research regarding symptoms, etiology, and treatment with males. Assumptions by researchers indicate that all of these are the same in males as they are in females. Professionals working with males with eating disorders have to rely upon

female-based research for diagnosing, assessing, and treating eating disorders in men (Rader Programs, 2009). The limited research involving male participants all points to the lack of enough research to truly diagnose, treat, and understand eating disorders in males.

Symptom, etiology and treatment differences between females and males.

Nelson (1999) studied eating behaviors in both female and male college students and found many differences between not only the symptoms expressed, but also the etiology of eating disorders between male and female participants. Ten percent of Nelson's 139 participants met the Diagnostic and Statistical Manual of Mental Disorders IV (American Psychiatric Association, 1994) criteria for having an eating disorder (Nelson, 1999). One difference Nelson found between male and female participants was how concern over their appearance developed.

Females were more likely to have a low acceptance of their bodies and poor self-esteem due to external factors. Male concern stemmed from current psychological stress. Males were more depressed and exhibited other mental illness problems than the females. In males, the only family relationship variable that contributed to their eating disorder score was father psychological control, whereas in females it was achievement orientation. Nelson's findings indicated males and females differ in how they develop eating disorders, the symptoms they displayed and how different circumstances may predict disordered eating behavior in males than in females (Nelson, 1999).

O'dea (2002), studied college men and found other differences between males and females with eating disorders. Male participants in O'dea's study developed eating disorders later in life than the female participants. The average age for females to begin eating

disordered behavior was 17 whereas the average age for men was 21. Men in the study were also more likely to use laxatives, vomiting and cigarettes to curb their appetite and compensate for their food intakes than females did.

After looking extensively through the literature to find information on males and eating disorders and finding mostly case studies, Williamson and Hartley (1998), conducted their own research. The results were as hypothesized; gay males were more likely to report body dissatisfaction than heterosexual males and gay males prefer thinner body images than heterosexual males. Williamson and Hartley noted that continued research is needed in this area.

Operationalizing Gay Identity

As noted previously a goal of this dissertation is to add information about males and eating disorders to professional literature. Limited research has indicated a possible connection between eating disorders in males and sexual orientation. Therefore, the present study will focus on gay identity development and eating disorder symptoms. In order to accomplish this goal gay identity theories as well as models which depict the stages persons go through to acquire a positive gay identity will be defined. A general problem involving researching gay persons is researchers cannot agree on an operational definition of the term gay. They argue about what components need to exist in the definition and if research participants should be allowed to self-identify themselves as gay (Shively, Jones, & Cecco, 1984).

Gay Identity Theories

Theories and models of gay identity formation have progressed from ones that attempted to treat individuals who engage in same-sex sexual behaviors as a disease to theories aimed to help gay, lesbian, bisexual, transgender (GLBT) persons develop a positive GLBT identity. Research published prior to the mid 1970's was based upon the presumption that not being heterosexual meant that a mental disorder was present and the non-heterosexual person needed to be treated (Kelly 2003).

A sociological theory of gay identity formation. Richard Troiden first published a theory that addressed GLBT person's in a positive light in 1977. Prior to the 1970's being gay was considered a choice, and was treated as a mental disorder (Kelly, 2003). People who were gay, lesbian, bisexual, transgender, (GLBT) were labeled as sexually deviant, and although there are still many people who believe that acting on same-sex sexual attraction impulses is a choice, most people believe that individual's sexual orientation is not a preference but a biologically determined piece of oneself. Troiden developed his theory to help people understand how men engaging in same-sex sexual behaviors accept being gay as their way of life.

Troiden was interested in understanding when and how individuals who engaged in same-sex sexual behaviors label their sexual attractions as gay, define their identity as such, begin associating with other gay males and when they entered "homophile love" (Troiden, 1979). After Troiden's 1977 article, he later published a model, in 1979. Troiden's theory was based upon research by Dank (1971) and Warren (1974) and a small study that was conducted by Troiden. Troiden's model consists of four stages, which describe the process

in which gay males realize and “decide” to be gay (Troiden, 1979). Troiden later published another model that uses sociological theories to portray an ideal and typical model of homosexuality identity formation (HIF) (Troiden, 1989).

Homosexual Identity Formation Theory. In 1979, Cass focused on the process by which a person comes to acquire a gay identity. A key tenet of her theory was the belief that gay men overcome internal conflicts about their sexual orientation (Cass, 1984). Cass’s theory includes a model, which depicts person’s gay identity as moving from conflict to gradual acceptance of their same gender attractions. Often individuals reach acceptance because they are tired of expending energy denying their feelings, which cause negative consequences on their emotional health (Bilodeau & Renn, 2005). Cass critiqued other theorist’s gay identity theories because of the lack of research published to support them, which motivated her to test her own (Cass, 1984). During her research Cass developed the Homosexual Identity Questionnaire (HIQ) (Cass, 1984) created as a means to identify HIF stages of participants (Marszalek & Cashwell, 1999).

A researcher who presented a life span approach similar to Cass’s was D’Augelli (1994). His model emphasized six developmental tasks, from exiting a heterosexual identity to entering a gay community. He coined two terms: “developmental plasticity” which is how a person responds to the environment and “inter-individual differences” which highlighted the developmental situation that is unique to each individual (Stevens, 2004). More recently, John Marszalek and Craig Cashwell (1999) developed their Gay and Lesbian Affirmative Development model (GLAD).

The GLAD model. The GLAD model combined Cass's HIF model with Allen Ivey's (1990), developmental counseling therapy (DCT). This model is different from others because it was designed to help professionals who work with GLBT clients (Marszalek & Cashwell, 1999). The GLAD model provides specific therapeutic techniques and interventions to be used with clients dependent upon their homosexual identity formation (HIF) stage (Marszalek & Cashwell, 1999). The GLAD model differs from other HIF models because it is based on cognitive theory. These and other models will be addressed further in the literature review.

Gay Identity Formation in the Current Study

For the present study, Cass's (1984) model will be used to explain participant's level of gay identity development. Cass's model is the most widely accepted model of homosexual identity formation (HIF). Her model was one of the most comprehensive of its time, due to the inclusion of psychosocial factors that could influence the coming out process (Marszalek & Cashwell 1999). Cass's (1984), definition of gay identity will be used. Cass spent a great deal of time going through the research literature of the time to determine how researchers defined identity, self, sexual orientation, and other relevant terms. Similar to more modern day complaints, Cass noted the inconsistencies amongst researcher's definitions (Cass, 1979).

Understanding identity. Two terms that Cass believed to be imperative to understanding gay identity formation are self-concept and identity. According to Rosenberg (1979), self-concept is "the totality of the individual's thoughts and feelings having reference to him as an object". Self-concept therefore contains all of the self-perceptions, attitudes and

how the individual feels about those perceptions and attitudes along with self-perceptions of how an individual wishes to be. Identity is composed of sets of ‘self-perceptions and the feelings that an individual holds about self’ in relation to a social category. Therefore gay identity is person specific and evolves from the individuals own self-images and understanding of what characterizes someone as gay (Cass, 1979).

The understanding of what it means to be gay develops from individuals integrating their own unique interpretation of “socially prescribed notions and self-developed formulations” (Cass, 1979). Cass felt that a fully integrated gay identity required direct contact with others, both heterosexuals and GLBT persons and that to reach the highest level of gay identity self-disclosure to others is necessary. The gay identity contains both a behavioral and psychological component, which reinforce each other.

For the purpose of the present study, participants will self-identify themselves as gay since Brady and Busse’s (1994), questionnaire will place them into a gay identity stage. Participants of the study will also take the Eating Attitudes Test 26 (EAT-26) (Garner, Olmstead, Bohr & Garfinkel, 1982), so that their gay identity stage can be compared to eating disordered behaviors they engage in. It is hoped that understanding more about when gay males develop eating disordered behavior can help create prevention programs targeted for gay men. A broader goal would also be to design treatment programs specific to this population.

Purpose

One purpose of this dissertation was to address the need for broader research within the eating disorders domain. Although men may have a lower risk of eating disorders, the

numbers of men who suffer from them continue to rise. Crossscope-Happel (2000), reported that in the 1990's several investigators called for new research to be performed solely on males with eating disorders, yet little research was conducted (Williamson, D., Muller, S., Reas, D., & Thaw, J. 1999). The present proposed research builds upon a small pilot study conducted for a thesis equivalency (Jaeger, 2009).

Jaeger (2009), aimed to include males in eating disorder research after combing the literature and finding extremely limited results. During the literature review a potential risk factor for males appeared in more than one study, however little research seems to have included this sub group of males. Gay males already have difficult lives. Gay men are seven to 10 % more likely than heterosexual males to attempt suicide. Gay youth are often abandoned by family; and make up a large percentage of the homeless population. Gay males need to be studied in greater depth to ascertain if they need different treatment methods than heterosexual females and to learn if they develop and maintain the disorders differently (Williamson & Hartley, 1998).

The National Eating Disorder Association (NEDA, 2009) has noted that sexual orientation is an important factor to examine. Recent research has shown that eating disorders in males are more prevalent in the gay community rather than the heterosexual community. Gay men suffer from bulimia at a rate of 14 % and 20% of gay males suffer from anorexia. Among men suffering from these disorders, between 10 to 42 % are either gay or bisexual. This number is high considering that only six to 10% of the male populations are gay (Renfrew, 2009). These findings inspired the research conducted in pilot study.

Jaeger (2009), distributed a survey to a pre-existing list serve for the Gay Lesbian, Bisexual, and Transgender Center on North Carolina State University's (NCSU) campus. The survey included a brief eating disorder inventory and questions inquiring about participant's demographic background. Results of the survey indicated that gay males were more likely to report eating disordered behavior than heterosexual males. Gay males also reported eating disordered behaviors more frequently than bisexual males and females, gay females and all transgendered participants. Prevalence of eating disordered behaviors for gay males was close to that of heterosexual females. The results of this pilot study further demonstrated the need for more research that focuses on gay males. The purpose of the current study is to examine the relationship between eating disordered behaviors in gay males and their stage level using a model of gay identity development.

Research Goal and Hypothesis

The goal of the current study was to expand upon the limited research with males and eating disorder and examines gay identity development as defined by Vivienne Cass (Cass, 1979). The hypothesis stated that the participants' gay identity stage level will influence the amount of eating disordered behaviors they engage in. Participants in the lower stages of gay identity development will report more eating disordered behaviors than participants in the higher stages of identity development. Although Cass believed that persons in the later identity stages were mentally, "healthier" there is no previous research that has studied connections between identity stage level and eating disorders. For the purpose of the present study, Cass's gay identity model was used to classify participant gay identity level stage.

Research question. The question that the current research attempted to answer is are there differences in the eating behaviors of non-heterosexual males in different stages of gay identity formation?

CHAPTER 2

Literature Review

Eating disorders have been mentioned in the professional research literature for many years. Although researchers have investigated the causes, consequences and the treatment of eating disorders, they continue to plague a significant number of persons. In the last decade research, focusing on eating disorders has changed significantly, moving from a focus on the social causes to possible cognitive causes. Some research has addressed gender differences in eating disorders as well however; research studies that include males are rare. The purpose of the present literature review was to address a possible gap, that is, the prevalence of eating disorders amongst gay males.

Eating Disorders

Eating disorder definitions. According to the Diagnostic Statistical Manual IV (DSM IV) (American Psychological Association (APA), 2005), there are three main eating disorders: anorexia nervosa, bulimia nervosa, and binge eating disorder. “Eating disorders not otherwise specified” is another category that is used for diagnostic purposes (APA, 2005). In common use, the terms eating disorder and disordered eating describe a variety of different things and can be confusing to lay persons. The National Eating Disorder Information Center (NEDIC) offers a glossary of commonly used terms to help laypersons understand eating disorder vocabulary (NEDIC, 2010).

Disordered eating terms. The term disordered eating covers a wide range of abnormal eating behaviors. The three main eating disorders mentioned previously, as well as other behaviors such as compulsive eating, habitual dieting, chaotic eating patterns and

ignoring physical hunger or satiety are included under this term. Disordered eating has negative effects on one's emotional, social, and physical health, causing feelings of being tired and depressed, leading to decreased mental functioning, concentration and malnutrition.

Pica. Pica is characterized by eating things that are not edible, such as plastic, dirt and cigarette butts. Most often pica occurs in persons who have developmental or psychiatric disabilities, are pregnant or in persons with poor eating habits. Pica can cause illness or death if the substances being ingested are toxic.

Rumination. Rumination is the chewing and spitting up of food repeatedly. Persons who ruminate are able to spit up food with no effort, without gagging or vomiting. Ruminators spit up their food quickly after eating and are able to sit and chew their food for hours at a time. Although this is common in infants, it should not occur past infancy. Although rumination is not considered an eating disorder on its own, persons with clinical eating disorder diagnoses may use this practice when eating to limit caloric intake.

Nocturnal sleep eating disorder. Persons with nocturnal sleep eating disorders binge and consume strange food combinations between the period between sleeping and waking. Upon awakening, the person has no memory of engaging in this behavior. Professionals disagree as to the classification of this disorder. Some believing it to be a sleep disorder.

Night-eating syndrome. Persons with night eating syndrome limit their food intake during the day and eat at night to compensate. The pattern of self-starvation often causes sleep disturbances. Persons who are obese or have bulimia are more likely to have this syndrome.

Anorexia athletica. Anorexia athletica is a condition where persons over-exercise to maintain a sense of control over their bodies. The persons often feel a sense of power and an

increase in self-respect. Over-exercising can have serious health consequences even if it is not clinically recognized as an eating disorder. Symptoms of anorexia athletica include fanaticism over food intake and weight, as well as taking time away from daily activities such as work, school, or relationships to exercise. These individuals also focus on the challenging aspects of exercise instead of enjoying fitness, tie their self-worth to physical performance, are never satisfied with their physical achievements, and deny that over exercising is a problem, insisting instead that it is required of athletes and is healthy.

Clinical eating disorders. Clinical eating disorders are those that are recognized as medical conditions. There are strict criteria for each disorder that guide professionals in performing diagnoses and developing treatment plans. The four clinical eating disorders are anorexia nervosa, binge eating disorder, bulimia nervosa, and eating disorders not otherwise specified (ED-NOS).

Anorexia nervosa. Persons with anorexia nervosa are obsessed with controlling their body weight. Self-starvation helps them to feel as if they have control over their lives. Anorexia most often begins during puberty. Symptoms include weight loss, an obsessive desire to be thinner, fear of becoming fat and an inability to accurately perceive their body shape and size. Anorexia can be distinguished from bulimia nervosa by the absence of menstrual periods, signs of starvation such as hair loss, the appearance of fine white hair covering the body, yellowing of the palms and soles of the feet and dry pasty skin.

Binge eating disorder. Persons with binge eating disorder eat large amounts of food in one sitting. Binge eaters participate in this behavior because they are hungry and have restricted their eating, which causes the hunger, or to comfort themselves, avoid

uncomfortable situations or to numb their feelings. They are also ashamed and embarrassed by their behavior, are larger than the average person, and do not try to compensate for their eating. Symptoms include eating large amounts of food in one sitting, an inability to stop eating, eating in secret, often quickly, feeling uncomfortably full after eating, and guilt about their eating behaviors. Often binge eaters are obese and have a history of failed dieting attempts.

Bulimia nervosa. Bulimia is defined by cycles of bingeing and purging behavior. Similar to anorexia, bulimics are driven by a desire to regulate their feelings and worries about their body weight and shape. The cycle starts when persons eat large amounts of food rapidly in a single sitting. The eating bulimic feels out of control, unable to stop eating. Feelings of helplessness often cause anger, sadness, and anxiety about weight gain. In response to these feelings, bulimics engage in activities to rid their body of the consumed food. This is done by vomiting, using laxatives, enemas or diuretics and excessive exercise. Bulimics also use their body weight and shape to measure their self-worth. Bulimia can be harder to detect than anorexia because most bulimics are at a normal weight.

Eating disorders not otherwise specified (ED-NOS). Persons who engage in a variety of anorexic or bulimic behaviors, but not frequently enough to be diagnosed with the disorders are often diagnosed with ED-NOS. Males may be diagnosed more often with this because they may not be able to lose enough weight to classify as anorexic.

Eating Disorders in Females

Prevalence. Eating disorders are often seen as disorders that affect only females. The prevalence of eating disorders in females is high, with statistics ranging from 65 – 90%

of persons with eating disorders being female. It is believed that anorexics are more likely to be female with 80 -90% of anorexic persons being female. One out of every 200 females is anorexic and three out of every 100 females are bulimic (NEDA, 2008) (Rader, 2008). It is important to note that prevalence rates are likely higher due to the hidden nature of the disorders. Eating disorders are a serious issue for females, and the mortality rate of anorexia for females between 15 to 24 years of age is 12 times higher than the death rate of all other causes of death (Sullivan, 1995).

Causes. Media's portrayal of woman has long been associated with eating disorders. Magazine and television images show women as being sex objects whose bodies are supposed to be thin. Most females cannot live up to this ideal, and for many years it was believed that eating disorders occurred exclusively in women for this reason. Although younger females are statistically more likely to have eating disorders, they are not the only ones at risk and more than just the media may be causing the problem. One risk factor for women is participation in sports with roughly 60 % of female athletes being diagnosed with an eating disorder. Females also often exhibit both anorexic and bulimic symptoms and are less likely to have binge eating disorder. Although the media may play a role in females developing eating disorders the media is certainly not the only cause (Rader Programs, 2008).

Eating Disorders in Males

Williamson and Hartley (1998) looked extensively through the literature to find information on males and eating disorders. Almost nothing was to be found. Research at this time was limited to mainly case studies. Until recently, it has been assumed that, if

males had an eating disorder they would share all of the symptoms that females display (Rader Programs, 2008). It was also assumed that males would benefit from the same types of therapeutic interventions. Neither of these assumptions may be accurate.

It seems unwise to generalize eating disorder information based on females to males. Crosscope-Happel (2000), reported that in the 1990's several investigators called for new research to be performed solely on males with eating disorders. Since 1997, some research has begun to emerge dealing with males and eating disorders.

Prevalence. According to Anorexia and Eating Disorders Inc. (ANRED, 2007) males, suffer from anorexia more often than they do from bulimia. ANRED reports that in 2001 for every four females who were anorexic, there was one male who was. It was also found that, for every eight to 11 females who are bulimic, one male suffers. Levels of binge eating disorders are now equally prevalent among both males and females (ANRED, 2007). Recent statistics are showing an even higher increase in eating disordered behavior. Statistics show that between 10 and 15 % of people with eating disorders are males (ANRED, 2007). Investigators are aware of approximately 24 million people in the United States suffering from eating disorders. This means that approximately two to three million of those suffering from eating disorders are probably male (Rader Programs, 2008).

Types of eating disorders in males. Three types of eating disorders are most common in males: Anorexia nervosa, bulimia nervosa, and binge eating. Although males and females share some symptoms for these disorders, some are also different. Anorexic males are often depressed, lonely and isolate themselves from others. They feel a strong need for control, may have sexual orientation or gender identity issues, have a decreased

interest in sex, are anxious about sexual activity, suffer from fatigue, low blood pressure and body temperature, and have thinning hair and heart arrhythmias. These men often have food rituals, have preoccupations with foods, refuse to maintain a healthy body weight, have an abnormal fear of gaining weight, and have a disturbed way of viewing their own bodies (Males and ED, 2003).

Males with bulimia nervosa are more likely to have sexual orientation or gender identity crises, are people pleasers, and received negative attention towards their bodies as children. They have a difficult time expressing feelings; suffer from edema, dental problems, electrolyte imbalances, fatigue, and a fear of gaining weight, the use of vomiting, laxatives, diuretics and other excessive means to control weight gain. They also have an inaccurate body image, a preoccupation with food, low self-esteem, and a tendency to hoard, hide, or steal food (Males and Ed, 2003).

The third eating disorder category is compulsive overeating. Males seem to differ from females who suffer from this disorder in one main area. Males reported feeling less guilty than females during bingeing behaviors (ANRED, 2007). Binge eating is often used to numb feelings of anger, tension, or depression. Bingers often hoard food, eat when not hungry, have recurrent episodes of binge eating, eat rapidly, are perfectionists, are people pleasers, have low self-esteem, are anxious, lonely, and depressed, and have experienced teasing as a child. They also often have fatigue, joint problems, blood sugar problems and heart problems. Since males differ from females in the area of guilt, they may not diet excessively after bingeing episodes, as do females with this disorder. Males who have a binge

eating disorder may be significantly more overweight than females with this problem (Males and Ed, 2003).

Unique aspects of males with eating disorders. There are unique aspects of males with eating disorders when compared with females. A study of college men offered evidence of age differences and eating disordered behavior between males and females. Men often develop eating disorders later in life than women do. The average age for a woman is 17, and the average age for a man is 21. Men are increasingly more likely to use laxatives, vomiting and cigarettes to curb their eating. (O’dea, 2002).

Differences in dieting behavior in males with eating disorders. Crossscope-Happel (2000) noted one difference between males and females who have eating disorders is the reason they are dieting. Females were found to diet because they feel fat, whereas men dieted because at some time in their lives they had been overweight. The second differentiation was that males diet more often to reach certain goals in sports or to prevent a sports injury that could result from being overweight. Lastly, males often feel that if they hold to a strict diet and exercise routine, they are in control of themselves, and this will lead to others having more respect for them (Crossscope-Happel, 2000).

Nelson (1999) studied the eating disorders in behaviors in both female and male college students. Ten percent of the 139 males who were studied meet the Diagnostic and Statistical Manual of Mental Disorders IV (American Psychiatric Association, 2004) criteria for having an eating disorder. The investigators believed that this 10 % was actually a lower number than what would be found in the general population because of the participants’ ages (Nelson, 1999).

Participants in the study were found to be obsessed with burning calories when exercising, being terrified of being overweight, and preoccupied with worrying about how much fat was on their bodies. They were less likely to exhibit purging behaviors, yet, 18% of the males in the problem eaters group did purge.

There was one important difference between males and females when they were compared at the end of the study. This finding showed both a similarity and a difference between males and females. Although both groups were concerned about their appearance, there was a difference in how their concern developed. Females were more likely to have a low acceptance of their bodies and poor self-esteem due to external factors. Male concern stemmed from current psychological stress. Males were more depressed and exhibited other mental illness problems than the females. These findings however, do not indicate that both of the groups cannot experience the same symptoms.

Females scored higher on some items and males scored higher on others. In males, the only family relationship variable that contributed to their score on the Eating Attitudes Test -26 (1982) was psychological control by fathers, whereas in females it was achievement orientation. Although this is only one study, it indicates that males and females can manifest the same symptoms and are plagued by eating disorders. Different circumstances may predict disordered eating behavior in males than in females (Nelson, 1999).

Risk factors in males. Most eating disorder research has focused only on females. Eating disorders have long been viewed as a problem that only affects “vulnerable” females whose aim is to be petite and thin. This belief is inaccurate. Even females who have eating disorders may not aspire to being model thin. In males, this stereotype is especially false

(Rader, 2008). Although research is limited, a few resources provide information about risk factors for eating disorders in males including how misdiagnosis occurs due to the differences in male risk factors compared to female risk factors.

Childhood obesity as a risk factor in males. One of the greatest risk factors for eating disorders in males is being overweight as a child (ANRED, 2007). A case study was conducted over four years on a 16-year-old male diagnosed with anorexia nervosa. His doctors found, that his anorexia was triggered by endless teasing as a child (Eliot, 2001). Dieting during childhood and adolescence is believed to be the most powerful eating disorder trigger in either sex.

Athletic participation as a risk factor in males. Participation in sports that demand thinness is another risk factor for males. Runners, jockeys, dancers, and wrestlers are at the highest risk. Elliot (2001) found that males with eating disorders are often more likely to be involved in sports and tend to diet for weight control. A common example is wrestling. Wrestlers are often forced to maintain extreme diets so that they can wrestle in a lower weight class. Cross-country and track athletes are two other groups of male athletes who strive to be thin, often to the point where they eat very little.

Males who wrestle, run track or participate in cross-country sports are often not maintaining a healthy body weight. If they are brought to a physician for health problems related to their low weight, a misdiagnosis often occurs (Eliot, 2001). Dancers and gymnasts are also at a higher risk for developing an eating disorder because of the emphasis on being thin. In a study of 695 male and female athletes, more than one third were preoccupied with

food, one quarter often binged to the point of sickness, 6 % purged, 4 % used laxatives, and 12 % fasted 24 hours or more following a binge (ANRED, 2007).

Stereotypes in male behavior as a risk factor in males. Research findings indicate another similarity amongst males with eating disorders. Males diagnosed with eating disorders often do not display the typical male stereotypes. They are more passive, and, as stated above, have often had negative reactions to their weight previously. They are more dependent and often have more avoidant personalities than males without eating disorders. Most males with anorexia do not conform to the general expectations for masculinity such as being competitive, strong, physically aggressive or independent (Males: Eating Disorders, 2003).

Professions and sexual orientation as a risk factor in males. A fourth risk factor for males is having a job such as modeling or acting, which demand thinness. A risk factor that correlates with one's profession is sexual orientation. A small amount of research has shown that men in the gay community are judged on their physical attractiveness in a similar way that women are in the heterosexual community. In the heterosexual male community, men are often not judged on the same criteria for physical attractiveness (ANRED, 2007).

Media as a risk factor in males. Anorexic males may form an image of their bodies differently than female anorexics. Females often develop a thin body image through magazines or the media. In comparison, males may develop their body image through participation in sports and other team activities (Crosscope-Happel, 2000). In American society, boys are indoctrinated from the moment of birth with what it means to be a man. Males may also be influenced by media, yet not in the same way as females. Males are never

portrayed in magazines as needing to be thin and waif like. Instead, males in magazines are masculine and athletic, which may contribute to males over exercising in order to attain an athletic build (Forbes, Adams-Curtis, Rade, & Jaberg 2001).

Boys learn at a young age, that being a man entails certain behaviors and attitudes that exude independence, career orientation, strength, aggressiveness, competitiveness, and other “manly” attributes. Anorexia is more prevalent in males who have a difficult time obtaining these goals. Emotional isolation often occurs for these boys, and they then begin to parallel a profile that is similar to females with eating disorders (Crosscope-Happel, 2000).

Inaccuracy of eating disorder statistics. Although men may have a lower risk of eating disorders, the number of men who suffer from them continues to rise. In 2000, 10 % of the people suffering from anorexia were males. Over one million males are diagnosed with anorexia every year. This number is currently approaching two million. It is extremely important for physicians and counselors to realize that men too suffer from eating disorders. One of the main problems men face in getting treatment is that many are misdiagnosed as not having an eating disorder, simply because they are men. Many physicians and counselors still hold to the false assumption that only women are plagued with eating disorders (O’dea, 2002).

Misdiagnosis in males. Physicians’ often look for other causes of weight loss in male patients before ever considering an eating disorder. One of the first signs of anorexia in females cannot occur in males, which makes it even less likely for them to be diagnosed. The loss of a menstrual cycle is often the first alert to a physician that a female patient may

be anorexic (Rader, 2008). Although males cannot suffer from this side effect, a different hormonal side effect can occur.

A hormonal side effect for men with eating disorders is a decrease in testosterone levels, along with a decrease in sexual libido. This side effect is often not reported due to shame and embarrassment (Elliot 2001). Males with bulimia are even more unlikely to be diagnosed as overeating is often not seen as a problem in men, and it is considered more common or normal for a male to binge. On average, it takes twice as long for a male to be diagnosed with an eating disorder then it does in a female. This can cause the side effects of the disorder to become more critical (Rader, 2008).

One biological difference between males and females that may relate to the lower percentage of males having an eating disorder is the body fat ratio. Biologically, males have a lower percentage of body fat than women and many men's sports, such as football rely upon size, to overcome opponents. Males have higher metabolic rates than females enabling them to be able to consume larger amounts of food. In general, males are often found to want to be "big and strong" where women aim to be petite (ANRED, 2007). The misdiagnosis and under diagnosis of eating disorders in men helps to maintain the stereotype that eating disorders are exclusively a female problem (Eliot, 2001).

Under reporting in males. Another problem with getting accurate statistics is that men are believed to under report their eating problems. In general, eating disorders are often under reported due to the hidden nature of the disorder. Males and females who have eating disorders often try to hide their eating behaviors from others. One other reason males try to hide their disorder is they fear physicians and others may assume that they are gay since they

may not fit the traditional male stereotypes. Many men would be reluctant to self-disclose if they believed that only “gay” men had the disorder (Crosscope-Happel, 2000).

Eating Disorders in Gay Males

Prevalence. An avenue to be explored further is eating disorder prevalence in the gay community. NEDA (2008) and other research states that sexual orientation may be an important factor to be addressed, and it seems that eating disorders in males are more prevalent in the gay community than in the heterosexual community. Fourteen percent of gay men suffer from bulimia and 20% of gay males suffer from anorexia. Among men suffering from these disorders, between 10 to 42 % are either gay or bisexual. This number is higher considering that it is estimated that only six to 10% of the male population are gay (Renfrew, 2008).

Research. Williamson and Hartley (1998) addressed the prevalence of eating disorders in young gay men. Their goal was to compare their results with previous studies done in the United States. The participants consisted of 91 males whose ages ranged from 15 to 25. Most of the heterosexual participants were sampled from a college and a telecommunications center. Gay participants were sampled from youth groups around Britain.

Participants were given questionnaires to measure dieting, bulimia, food preoccupation, and oral control. Body dissatisfaction was also measured. Line drawings developed by Stunkard et al (1980), Fallon and Rozin (1985) with images ranging from 1 (very thin) to 9 obese, were shown to participants, who were then asked to indicate their current and ideal body image. Dissatisfaction was measured as the discrepancy between the

two. Self-esteem and body satisfaction were also measured. The results were as hypothesized. Twenty one percent of the gay males, compared to 4% of heterosexual males, had clinical scores over 20 (minimum score for disordered eating on the EAT-26). Gay males were more likely to report body dissatisfaction than heterosexual males and gay males preferred thinner body images than heterosexual males. The findings were similar to those in the United States and other countries.

Although the findings were expected, Williamson and Hartley (1998) noted that continued research is needed in this area. They felt that research comparing gay male's homo-negativity ratings with their disordered eating behaviors, and recognized that studies with larger sample sizes were needed. The authors also noted that this population is often under a tremendous amount of societal stress and is more likely to attempt suicide. Gay males are 7-10 % more likely than heterosexual males to attempt suicide. More in depth research could be addressed to investigate prevalence of eating disorders by type in the gay population and could include comparing lesbian women to gay males and heterosexual women (Williamson & Hartley, 1998).

Treating Eating Disorders

Eating disorders are difficult to treat. Research findings show that bulimia and binge eating have more positive treatment outcomes than anorexia. It is also believed that some type of treatment, whether individual or group therapy, support groups, or hospitalization is needed for recovery. Both females and males need help in the recovery process. Research shows that males who are seen by competent professionals who are aware of the differences in treating males and females often have more positive treatment outcomes (ANRED, 2007).

Recommendations for counselors. Twenty percent of men in O’dea’s (2002) study were diagnosed with a type of eating disorder. Another 30% of the group displayed signs of an exercise disorder. A challenging aspect for treatment of this group of men was, although most of the men diagnosed knew they had a problem, not even one previously sought treatment. This is critical information for counselors. Counselors need to be aware of the fact that men may be less likely to self-disclose. Since it is harder to determine when males have eating disorders, counselors need to be aware of the messages they give clients during counseling. One observation stated by the author was that, because men often feel that they need to be a perfect, competitive heroic specimen, they often develop disordered eating habits. Again, the problem with diagnosis is that these men may often not be tremendously underweight, yet they may use laxatives, binge, or eat restrictively (O’dea, 2002).

Differences in treatment for males with eating disorders. Since males and females both have eating disorders, should they be treated in a similar fashion? Currently, males are often being treated by using the same methods that are used with females even though the small amount of research that has been done shows that these methods are ineffective for males. Almost all treatment programs have been designed with females in mind, and, when males are treated, they are often treated side by side with females. (ANRED, 2007).

Males in treatment for eating disorders have reported being uncomfortable in mixed-sexed treatment groups. They report feeling that repercussions they face from the disorder are different from those faced by females (Renfrew 2008). Males are also less likely to self-disclose than females. The lack of self-disclosure may be exacerbated by being placed in

mixed-sex treatment groups. Papini and Franke (1990) recommend individual therapy over group therapy for males seeking treatment for eating disorders. They believe individual counseling would help promote self-disclosure. Males may also be less likely to self-disclose due to traditional male stereotypes. Males report difficulty in disclosing highly emotional material which conflicts with the stereotypes they hold about the importance of being stoic, manly and strong (Davies, et.al, 2000).

Antidepressants used to treat eating disorders. Some antidepressants are being used to help curb the symptoms of these disorders. Without receiving therapeutic intervention while taking antidepressants, the client is more likely to redevelop the disorder. It appears that cognitive behavioral therapy alone is more effective than pharmacological intervention alone. If medication is prescribed, it should be done in conjunction with counseling therapy.

Treatment for anorexia is trickier and research findings about positive results in this area are limited. Prozac is the medication used most often with anorexics, and it has been found to be helpful in preventing relapses after their weight is restored. Peterson and Mitchell (1999) noted that anorexia is harder to treat, and the treatments are often less successful. It seems that there is a greater psychological disturbance related to anorexia, which may make it harder to treat. Anorexics in treatment also are often involved in numerous medical treatments as well. This can confound the issue of determining what is truly treating the disorder (Peterson, & Mitchell, 1999).

Cognitive-behavioral-therapy in treating eating disorders. Cognitive therapy, one of many types of psychotherapy stemming from the work of psychoanalytically trained

Aaron Beck, falls under the broader category of cognitive behavioral therapy (CBT) (Beck, 2009). Cognitive theories and therapies have been used to understand the etiology and treatment of many mental disorders. Cognitive-behavioral-therapy (CBT) is one type of therapy that is commonly used to treat eating disorders because of its high success rate. Bulimia and binge eating disorder have more successful treatment outcomes with CBT than anorexia. CBT is especially helpful in reducing bulimia symptoms. CBT related findings show a reduction in the frequency of binge eating and purging that ranges between 40 - 97% with an average of 75%. Abstinence rates are lower, ranging from 8% - 97% with the average being 40% (Beck, 2009).

Moving away from social causes of eating disorders to cognitive causes. In the last decade research into the etiology of eating disorders has begun to shift from blaming media and other social influences to addressing the role cognition plays in eating disorder development. In order to understand possible cognitive influences of eating disorders it is essential to understand how cognitive therapy and theories were developed.

Cognitive therapy. Cognitive therapy is based on a cognitive model, which assumes the way a person feels emotionally is influenced by the way a person perceives a situation. The model states all people may experience the same situation; however, each individual may perceive the situation differently. It is the individual's perceptions of the events that influence how they personally feel (Beck 2009). For example, two girls with eating disorders may read the same material about how cognitive therapy can be beneficial for treatment. One girl may think "Great! I have finally found help for my problem" and feels elated while

another girl may think “Wow, this sounds really hard, I don’t think it will work” and feels depressed.

Cognitive behavioral therapy aims to teach clients to challenge automatic thoughts. Automatic thoughts occur below the level of conscious processing, making them difficult for clients to address without therapeutic interventions. Therapy helps clients with eating disorders to recognize the automatic thoughts they have about food and challenge them. Once these thoughts are identified, the counselor can help the client to engage in behavioral experiments, such as eating forbidden foods during a session, which slowly change the client’s behaviors (Beck, 2009).

Cognitive processes which effect eating disorder development. Cognitive theories of eating disorders are also important because they may provide new avenues for treatment in a population that are excluded from most of the literature. Early research on eating disorders excluded males and focused on the social causes of the disorder. For years, it was believed that the media’s portrayal of skinny females, in addition to social pressures contributed to extreme dissatisfaction within females with their bodies (ANRED, 2009). The small amount of research that has involved males shows sexual orientation, participation in athletics, and being overweight as a child as risk factors in developing eating disorders (Males and ED, 2009). More recently, factors contributing to eating disorder development grew to include; co-morbidity with other disorders, cognitive biases, differences in informational and attentional processing and anxiety (Williamson, White, York-Crowe & Stewart, 2004).

Anxiety’s role in eating disorders. Research has identified anxiety as a component in bulimic behavior. Levels of anxiety decreased in bulimics after eating “forbidden foods” if

the individuals engaged in purging behavior. Anxiety is also linked with persons not diagnosed with an eating disorder but who demonstrate high levels of body dissatisfaction (Epstein & Sloan, 2005). Investigations of cognitive perceptual distortions received mixed results. Studies addressing the use of self-report inventories with persons holding irrational and maladaptive beliefs about their body shape and weight were included.

Information processing. Recent laboratory research has been conducted to look at predictions based in cognitive behavioral theory to study biases in attention, memory, and judgment, which relate to information and schematic processing theories (Williamson, et al., 1999). Information processing theories assume that material (stimuli), which are emotional and/or threatening, will be processed differently than non-threatening information. The difference in the processing of stimuli contributes to the development and maintenance of disorders (MacLeod, Matthews & Tata, 1986). Early research hypothesized eating disorder patients to differ from controls in speed of processing weight and food related words, enhanced memory for schema consistent information, and cognitive biases in attention, memory, and judgment.

Similar to people with anxiety disorders, eating disorder participants show hyper-vigilance and an orientation towards a threatening stimulus. The threat for individuals with eating disorders involves the ego-self and the stimulus, which threatens their self-esteem. (Waller, Watkins, Shuck & McManus, 1996). Maladaptive schemata in relation to food, shape, weight and self were one of the first research supported accounts of biases in individuals with eating disorders (Vitousek & Hollon, 1990).

Schematic processing. Theories in the cognitive behavioral causes of eating disorders addressed schematic processing biases in individuals with eating disorder. Included is researching formation of schemas that center on individuals over concern with body size and eating. Schemas for body size are stereotyped information loaded with emotion.

Information about individual's weight and shape is overvalued by individuals with eating disorders, therefore giving an overarching importance to it over all other cognitive structures.

One's schemas relating to body shape is considered personal, unlike other schemas. Most people have similar schemas about riding a bike, tying their shoes, and driving a car; however, schemas in clients with eating disorders are different from those in non-eating disordered clients. As the body image schema takes an active role in the processing of information for individuals with eating disorders, stimuli that would be considered ambiguous to others, are biased by the strict personal meanings of the eating disordered person's body schema (Williamson, et.al., 1999).

Therapists should be aware that schema processing occurs automatically without a conscious awareness or attention. Since the processing occurs beyond the range of conscious awareness, clients may be completely unaware of its occurrence. This can be frustrating to therapists because the eating disordered client may have no control over schematic processing, and it takes time to learn new schemas. Since the body image schema is unconscious, it causes the schema to be biased but gives the schematic cognition an air of reality. This informational bias becomes enmeshed within all functions of the dominant schema including attention, judgment, memory, and body image. Any stimuli that relates to

a person's body shape or weight, will be processed in a biased way, towards an interpretation of fatness.

Although this is seen in eating disordered patients, an implication of the theory is that the cognitive bias is actually a function of a disordered body schema, not of the disordered eating behavior. It is for this reason that cognitive behavioral theory would predict the disordered schema not just in eating disordered clients, but also in those who are also overly preoccupied with their bodies, weight and shape, but do not meet the DSM IV criteria for an eating disorder. This hypothesis has been tested and supported in many studies of cognitive bias associated with eating disorders and body dysphoria (Williamson, et.al, 1999

Assumptions of Cognitive Eating Disorder Theory

Williamson et al., note that there are three assumptions in cognitive eating disorder theory (1999). First individual's differences on cognitive performance tasks reveal underlying psychopathology. Second, cognitive biases of individuals associated with eating disorders are specific to the individual's self-referenced eating and body shape. Third, cognitive biases are primarily a function of the obsession with thinness/fear of fatness and cannot be observed in non-clinical subjects (Williamson et al., 1999).

Cognitive biases. Cognitive interpretations of eating disorders suggest a different cause in their development aside from possible social causes. Research in cognitive biases of attention and memory began to focus on mental disorders, which included anxiety and panic, phobias, post-traumatic stress, obsessive-compulsive disorder and depression. Research investigating differences between non-clinical persons and eating disordered clients has

included attention and memory biases. Findings support the contribution of attention and memory biases to eating disorder development and maintenance (Lee & Shafran, 2004).

Williamson et al. (1999), clearly explained the different types of cognitive bias that are important to understand as a helping professional. Some research articles do not include definitions of the constructs being researched, making it difficult for lay people to read and understand without looking up other studies or definitions. Williamson et al. also provides research evidence to support claims and elaborates on limitations.

Attentional. Attentional cognitive biases include; increased sensitivity to and absorption of eating stimuli. Stimuli incorporate many things: pictures of food, bodies, magazine pictures, or other things related to food. It is assumed that one's attention is biased toward stimuli related to body fatness and fattening foods because both types of stimuli are a threat to persons who are concerned with gaining weight (Williamson, et al. 1999).

Once attentional biases exist, they are maintained through one's preoccupation with body appearance, causing stimuli related to one's body to predominate all competing stimuli (Fairburn, Cooper, P., Cooper, M., McKenna, & Anastasiades, 1991). Awareness of threatening stimuli enables individuals with eating disorders to avoid situations that cause anxiety (Matthew, Richards & Eyesneck, 1989). Since individuals with eating disorders fear gaining weight, all stimuli that are related to fatness, are processed as threatening (Fairburn et. al. 1991). The cognitive theory of eating disorders therefore hypothesizes that stimuli processed as threatening will capture the eating disordered person's attention more readily than stimuli that are emotionally neutral.

Two experimental strategies have been used to test this bias in a research setting they are the Stroop color naming task and dichotic listening task. The Stroop task was reformatted to measure attentional bias, because its original intent was to test an individual's cognitive abilities. When the task was reformatted for emotional words, Williams, Matthew and MacLeod (1996) found task performance was disrupted when the words named related to specific psychopathology. This result has been found in many studies with participants who have anorexia nervosa (AN) and bulimia nervosa (BN) (Fairburn et al., 1991); (Watts, McKenna, Sharrock, & Trezise 1986).

The dichotic listening task, a more accurate measure of attentional bias than the Stroop task, presents participants with two prose passages, one in each ear (Mogg, Bradley & Williams, 1995). Participants repeat aloud a passage which was presented into one of their ears. Target words are inserted into the passage and participants are asked to detect target words presented in both ears. Participants readily detect target words in the attended passage but not the unattended unless the target words are emotionally significant (Burgess, Jones, Robertson, Radcliffe, & Emerson, 1981).

Schotte, McNally, and Turner (1990) used this task with bulimics and found similar results, consistent with predictions from cognitive behavioral theory. Enhanced sensitivity to information related to a person's special concerns can also be tested using lexical decision tasks (Hill & Kemp-Wheeler, 1989). In this task, participants are instructed to determine if a string of letters quickly displayed is a word or non-word. Accuracy is predicted to improve with increased salience of words. Thus, in the lexical decision task, performance is enhanced by attentional bias. Fuller, Williamson and Anderson (1995) used this technique with groups

of women differing on degree of body dysphoria. High body dysphoric women detected body size and food words more accurately than other groups.

Memory. Cognitive theory predicts that “concerning” information that individuals relate to themselves will be more readily encoded in memory and accessed easier when recalling it. For example, individuals with eating disorders who concern themselves with, weight, shape and thinness, would encode stimuli related to those self-referenced concerns faster and access them quicker when recalling it (Baker, Williamson & Sylve, 1995).

Baker et al (1995), investigated a recall bias for fatness and thinness stimuli using a self-referent encoding task. Results indicated the importance of the use of emotionally relevant stimuli for recall bias to occur. The authors also examined the effects of negative mood induction on recall. Participants who had negative moods induced and had high body dysphoria recalled significantly more fatness words and fewer thinness words than low body dysphoric participants. The mood induction procedure effectively induced negative mood, and mood changes enhanced the recall of depressive words but not fatness, thinness, or control words.

Sebastian, Williamson, and Blouin (1996) used a self-referent encoding task to determine the presence of memory bias for emotional body-related words in eating disorder participants. Three groups of female participants were compared: eating disorder, high body dysphoria, and a control. Three word types were presented: fatness, non-emotional body-related, and neutral words. The researchers found an increased recall in the eating disorder group for fatness words, and no differences in recall between the groups for the other word types.

Watkins, Martin, Muller, and Day (1995) compared high and low body dysphoric participants on recall of items seen in an office. Participants were left in an office for 45 seconds and then asked to recall objects in the room. Objects consisted of office items, food related items, body related items, and items not characteristic of an office. The results indicated the high body dysphoric group recalled more body related items than participants with low body dysphoria did and no other differences existed between groups.

The results of the three studies suggested recall of fatness words is enhanced in persons diagnosed with eating disorders or in persons preoccupied with body size and shape. Baker et al. (1995), found high body dysphoric participants had difficulty recalling thinness words, which can be interpreted as evidence for encoding errors occurring when participants tried to memorize or recall words. Again, the findings supported cognitive behavioral theory of eating disorders predictions and indicated that persons with eating disorders who recall information related to fatness or thinness have a cognitive bias to body image (Williamson, et al., 1999).

Judgment. The central premise behind judgment bias states that individuals selectively interpret situations. When persons preoccupied with their own body size are presented with ambiguous situations, information is interpreted selectively (also known as a judgment) about the ambiguous situation. The selective interpretation helps to keep information congruent with their body concerns. Williamson et al. (1999), describe studies investigating judgment bias in different types of eating disorder participants.

Jackman, Williamson, Netemeyer, and Anderson (1995), used a sentence task with body dysphoric women to investigate errors in judgment of ambiguous sentences (1995).

Participants were presented with sentences via audiotape. Sentences were constructed to be relevant to the concerns of persons preoccupied with body size, yet all sentences could be interpreted with either a fat or thin meaning. Participant's interpretations were measured upon completion of the listening task. The results suggested body dysphoric participants recalled body-related ambiguous situations with a fatness interpretation, whereas low body dysphoric participants recalled sentences with a thinness interpretation.

Perrin (1995), sought to extend the results of Jackman et al. by including participants with eating disorders. The results indicated that both eating disorder and body dysphoric participants recalled imagery of body related situations with a fatness interpretation. Control groups recalled imagery with a thinness interpretation. Studies with bulimic participants have found bulimic participants to overestimate the amount of food they ingested (Wolper, Heshka, & Heymsfield, 1995). This finding is significant since general findings indicate an underestimate of food intake by most people. Similarly other research shows that, as caloric intake is increased with bulimic participants, reports of overeating occurred at a significantly higher rate than in control groups (Hadigan, Walsh, Devlin & LaChaussee (1992).

Body image. Disturbance of body image is a primary diagnostic feature of eating disorders. Body image concerns are criteria for both anorexia and bulimia nervosa according to the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) (American Psychiatric Association, 1994). Since considerable evidence supports that negative body image may predict severity of symptoms in individuals, understanding body image as a construct is essential for therapeutic management of eating disorders. Research

proposed body image should be conceptualized as a form of cognitive bias instead of a perceptual process (Williamson, et al., 1999)

Cognitive Behavioral Therapy Implications for Treatment

Although results from the reviewed studies support cognitive behavior theories assumption of eating disorders, treating eating disorders is a difficult task. Therapists should be aware of treatment implications specific to eating disorder clients (Williamson, et al., 1999).

Content specificity. Research supports a primary pathological concern of eating disordered patients relates to body size, shape and fattening foods. These concerns mold into an overvalued idea about thinness and fatness. An aim for cognitive behavior therapy in treatment would be modification of the client's cognitive biases and their obsessional thinking in relationship to their own specific body concerns.

Situational specificity and self-reference. Results of cognitive bias studies indicate positive effects only when participants relate themselves to the experimental task. Experimental tasks are assumed to activate the participants self - schema, which as explained previously differ from other schemas since they relate only to the individual.

Automaticity of reactions. Some studies indicate that cognitive bias can generate emotional responses that appear to be automatic and unable to be controlled by participants. Automatic reactions occur every day for individuals with eating disorders who cannot imagine any other possible reaction. Therapists should never underestimate how real these reactions are to the client, or their strength.

Apparent reality. Individuals with eating disorders are unaware that reactions to stimuli in the environment are “exaggerated.” To the client with an eating disorder their anxiety and fear are in response to a real situation (gaining weight after one meal) and efforts by therapists to convince clients otherwise are ineffective. It is crucial for therapists to recognize the difference in the client’s apparent reality and their own, and to acknowledge the difference to the clients.

Denial and resistance to treatment. The apparent reality of the client causes resistance to treatment, termed “overvalued ideation” (Williamson, et al., 1999). The key tenet of this concept is the inability of the eating disordered individual to understand the issue being discussed in different terms. Again, therapists need to be aware that clients with eating disorders often resist treatment feverishly and work through their frustrations with the clients in a beneficial way.

Misinterpretation of therapeutic interventions. Automatic processing of stimuli can cause eating disorder patients to misinterpret the intent of interventions. Therapists weighing clients may ask them to turn their back to avoid becoming overwhelmed by minor weight fluctuations. This mundane act may be seen by the client as hostile, as fear and anxiety about possible weight gain occur automatically. Evaluating patients’ responses and assisting them in thinking deeper about events in rational terms may be useful.

Hedonic asymmetry. Eating disorder treatment is a painful process for patients. Treatment activates the patients’ fear, and anxiety of weight gain, threatens their “overvalued ideations” with little positive reinforcement received. Therapists should remember that the

process is challenging and that patients may be unable to formulate new beliefs about weight, food, shape and the like due to the cognitive biases that still exist.

Limitations

One limitation of the cognitive therapy research discussed is the exclusion of male participants. Broader participant groups including males, different ethnic and racial groups are needed to validate results and establish generalizability in the larger population. The lack of male participants may be due to a limited number of males available in treatment programs as well as the under diagnosis of males with eating disorders. The research implies an increase in males with eating disorders, although they are often overlooked. Males with eating disorders may respond to different treatment methods than females. The research supports all of these claims, however, diagnostic criteria for males or that is inclusive of both biological sexes does not exist (Fernandez-Aranda et al., 2009).

Another limitation is the exclusion of anorexic participants in the research. This exclusion may be due to the number of anorexics in the general population compared to bulimics or participants with body dysphoria. Since anorexia is more dangerous and deadlier than other eating disorders, more research should incorporate this group. Lastly, many of the studies discussed in the literature include small sample sizes. Research with larger groups is needed to help validate findings.

Discussion

Only one out of every 10 males and females diagnosed with an eating disorder receives treatment. Over 80 % of people with eating disorders do not get enough treatment to stay recovered and are sent home weeks earlier than the recommended stay. Ninety-six

percent of eating disorder professionals believe that their anorexic patients are put into life threatening situation because of the fact that insurance covers a very short period of treatment before their clients are released. Anorexia is the third most common chronic illness among adolescents and it is the deadliest mental disorder. Although all of these statistics are present in current research and literature, eating disorders continue to be a problem that affects both females and males. (Rader Programs, 2008).

In order to progress in treating eating disorders it seems necessary to step away from the antiquated ideas that movies, media, magazines and the like that have caused females to feel poorly about their bodies and force them to purge or starve. Instead of blaming extrinsic causes, it is time to focus on intrinsic processes that may not only proliferate the development of eating disorders, but also maintain them. If intrinsic causes can be identified persons with eating disorders can seek treatment that will help them to change their thoughts and behaviors about eating.

Williamson et al., 1999 explain the importance of looking at each individual and situations specific to them. Seemingly ambiguous situations cause different reactions in each individual. One's apparent realities are also individual specific (for example one individual may believe they have gained weight after just one meal). Individual's cognitions are different and need to be addressed as such; furthermore, no one treatment will be effective for an entire group of individuals. The positive news is that there is evidence (although limited, as more research is needed) that, cognitive biases can be changed. The process can take anywhere from six months to a few years depending on the severity of the eating disorder. Also suggested by research is the assumption that, unless cognitive biases are

changed in eating disordered individuals, even individuals in “recovery” will revert back to their previous state of disordered eating (Williamson et al., 1999, 2004).

Unlike previously held beliefs, the research shows that males do suffer from eating disorders, and the number of males affected continues to rise. Males and females differ in why they display eating disordered behavior and can differ in the types of disordered behavior displayed. Although very little research has been conducted on treatment for males with eating disorders, it is known that it is of critical importance that men also undergo therapy.

Over time, cognitive behavioral methods were developed, investigated, and applied to the treatment of eating disorders (Williamson, et al., 1999). The research discussed previously explains how four different cognitive biases; attention, memory, judgment, and body image, may contribute to eating disorder development as well as to the maintenance of eating disorders. The results of the reviewed studies help to validate cognitive behavioral theories of eating disorders although Williamson et al. (1994, 2004), noted that research testing the predictions of CBT of eating disorders is still lagging behind advances in treatment. A finding of significance indicates the use of cognitive behavioral therapy in addition to drug interventions in order to decrease eating behavior etiology, especially in bulimic participants (Nye & Cash, 2006).

An important ethical consideration that helping professionals need to be aware of is the fact that most eating disorder therapies that are in use have been based solely on research based on female participants. Investigators note that it is dangerous to generalize findings onto populations that have not been studied. Other limitations of the research reviewed

include small sample sizes, the lack of males willing to disclose their eating disorders, and misdiagnoses by physicians. Counselors and other helping professionals need to be aware of the distinctions between males and females in diagnostics, risk factors, and treatment. Suggestions have been made to pursue further treatment research and change how treatment is currently being provided. Counselors and doctors need to advocate for clients and help to change insurance legislation so that their clients can be effectively treated. Millions of males and females are affected by eating disorders and it is time to start saving lives instead of ignoring the problem (Renfrew, 2008).

There are many possible avenues to broaden research for males with eating disorders, including the investigation of how cultural factors may influence eating disorders. Again, most of the research is focused on white females with little emphasis on other ethnicities or race. Sexual orientation of those with eating disorders could also be further explored, along with gender roles and stereotypes. In conclusion, it is important for all helping professionals to attempt diagnosis and treatment of eating disorders without conforming to society's typical gender stereotypes and roles, for anyone can be affected by one of the deadliest of all mental disorders.

Gay Identity Formation

The most widely accepted theory and model of homosexual identity formation (HIF) was proposed by Vivienne Cass in 1979 (Marszalek & Cashwell, 1999). Previously, the few articles that were published on gay identity development were based upon the presumption that being a GLBT person was a treatable mental disorder (Kelly 2003). Richard Troiden

(1977) was one of the first researchers to publish a theory that addressed sexual orientation in a different way.

Prior to the 1970's being a GLBT person was considered a choice and treated as a mental disorder (Kelly, 2003). People who were gay, lesbian, bi-sexual, transgender (GLBT) were labeled as sexually deviant. There are still people who believe that acting on same-sex sexual impulses is a choice, however, most people believe that individual's sexual orientation is not a preference but a biologically determined piece of oneself. The early work of Dr. Evelyn Hooker who fought to have homosexuality removed from the DSM III, and the American Psychological Association's (APA) continued support of the belief that being GLBT is not deviant, nor is it treatable, helped to change the public's opinion (Queer Theory, 2009).

In August of 2009 the APA voiced concern stating that therapists should not tell clients that it is possible to change one's sexual orientation nor should they participate in therapeutic treatments often termed reparative therapy. The APA noted that there is no evidence showing that reparative therapies are effective or safe (APA, 2009). The terminology Troiden uses leads to the belief that being gay is a choice, however during the time of his work, this view was commonplace. For the purpose of this paper, I will use inclusive language where possible and refer to males who engage in same-sex sexual interaction as gay, or non-heterosexual groups of people as GLBT.

Theories of Gay Identity Development

Richard Troiden's Model of Homosexual Identity Formation. Troiden's model was developed to help understand how men engaging in same-sex sexual behaviors accept

being gay as their way of life. Troiden was also interested in understanding when and how individuals who engaged in same-sex sexual behaviors label their same-sex sexual attractions as gay, define their identity as such, begin associating with gays and when they entered “homophile love” (Troiden, 1979). Troiden’s theory was based upon research by Dank (1971) and Warren (1974) and a small study that Troiden conducted. Troiden’s model consists of four stages that describe the process of how gay males realize their sexuality, and “decide” to be gay (Troiden, 1979).

Participant sample. Troiden’s (1979), model was based upon a small snowball sample of approximately 150 gay males. One criticism of Troiden’s theory is that he personally asked gay males he knew to participate in an interview. Those males referred other men, who referred even more. Although using a snowball technique to gain participants is a useful tool, Troiden personally interviewed the men to participate in his study, possibly resulting in researcher bias.

Stages of Troiden’s model. The first stage of Troiden’s model, Sensitization, is divided into two phases; early (prior to age 13) and late (age 13-17). This stage is marked by an individual’s sense of distance or differences from his more conventional peers. The second stage, known as Dissociation and Signification, consists of splitting the individual’s sexual feelings and activities from sexual identity. Males in this stage try to disassociate what they are feeling or doing from their identity. According to Troiden, this defense strategy, causes introspection on the significance of the individual’s feelings. The third stage, Coming Out, occurs when individuals are able to label their feelings or activities as gay. Self-defining oneself as gay, including becoming more involved in the subculture, and

viewing being gay as a viable lifestyle alternative all occur in this stage. The final stage, Commitment, occurs when gay males fully adopt being gay as their way of life and believe that no benefit would be gained by being heterosexual (Troiden, 1979).

Limitations. Like other models of the time, Troiden's lacked necessary safeguards against subjectivity, including blind judges, multiple raters and establishing inter-judge reliability measures (Cass, 1984). Troiden's inability to include the interview techniques also limits the ability for other researchers to retest his research. Other criticisms of his theory relate to the sample size and the generalizability of his results. Seventy five percent of the participants were from New York City and a suburb, and 25% were from Minneapolis Minnesota. All of the participants were white males, 66% of whom had attended college or graduate school (Troiden 1979).

Troiden's results were not generalizable past his small sample size, nor were they able to be retested since he did not provide information about interview techniques, questions or if statistical analyses were used. Although Troiden's model has limited validity and reliability, it may have helped to spark an interest in other researchers to further study gay identity formation. Troiden (1989), later published another model that uses sociological theories to portray an ideal and typical model of homosexuality identity formation (HIF). This model noted the importance of members of the GLBT community having a strong support system and affirming environment to help facilitate both self-definition and self-acceptance of GLBT persons.

Vivienne Cass's Homosexual Identity Formation Model. In 1979, Cass published a six-stage model of HIF. Her model was one of the most comprehensive of its time, due to

the inclusion of psychosocial factors that could influence the coming out process (Marszalek & Cashwell 1999). Similar to Troiden's model, Cass's model focused on the process by which a person acquires a gay identity. A key tenet of her theory is the belief that gays overcome internal conflicts about their sexual orientation (Cass, 1984). Cass's theory depicts HIF as moving from conflict to gradual acceptance of same gender attractions. Often individuals reach acceptance because they are tired of expending energy denying their feelings causing negative consequences on their emotional health (Bilodeau & Renn, 2005).

Cass published a small amount of qualitative and quantitative research relevant to her theory. She critiqued other theorist's gay identity models because of the lack of research published to support them, which motivated her to test her model (Cass, 1984). Cass developed the Homosexual Identity Questionnaire, created as a means to identify the HIF stage a person was in (Marszalek & Cashwell, 1999). Cass's model consists of six stages, including an extra pre-stage.

Pre-stage. Persons in the pre-stage believe that they are heterosexual and believe that being gay has nothing to do with them; these persons will likely never question whether they are gay. Only persons who question their sexual identity advance into the first stage of Cass's model (Cass, 1979).

Stage one: Identity confusion. Individuals beginning the Identity Confusion stage, question their sexuality and wonder if they may be gay. Individuals in this stage are often confused about many things including who they are, and where their lives are going, and may ask themselves whether they are heterosexual. Some individual's may feel or act in same-sex sexual ways but rarely tell anyone about their experiences. These individuals believe that

being gay has something to do with them and may experience turmoil over this discovery (Cass, 1979). Cass believed that individuals in this stage must consider the possibility of being gay and accept or reject it. If the possibility is accepted, the person will then move on to the next stage (Cass, 1984).

Stage two: Identity comparison. As the name implies, Identity Comparison consists of individuals looking at others and comparing themselves. Persons in this stage observe both gay and heterosexual persons and notice the wider implications of what being gay entails. Persons in this stage feel that they are “probably” gay but that it is not definite. Being gay is a part of them, but may not be stable and could change at any time. Individuals in this stage may feel isolated, alone and different from others. They begin to seek out others who are gay to help understand what they are feeling but are not comfortable disclosing their feelings to others (Cass, 1979).

The first two stages describe the beginning of establishing a gay identity. Individuals may not accept their sexuality and are searching for their sexual orientation (Cass, 1984). In the third stage, a person’s gay identity becomes a more permanent part of their identity.

Stage three: Identity tolerance. Identity tolerance occurs when individuals become increasingly committed to their gay orientation and identity. Persons in this stage do not accept being gay; instead they only tolerate it. They are certain they are gay, but view it as possibly being temporary. Disclosure does not occur because of fear or concern about how others may react. These individuals feel a strong need to meet other people like themselves in order, to decrease feelings of isolation and that they are the “only ones.” They also seek to

increase their understanding of being gay, and continue to seek out others who are gay, and avoid those who are not (Cass, 1979).

Stage four: Identity acceptance. Identity acceptance is marked by beginning to form positive views of one's sexual orientation. These persons may feel like they fit into gay society and can see connections between themselves and other gays. They accept the possibility of being gay versus merely tolerating it. Individuals in this stage try to pass as being heterosexual when they are not around other gays, therefore, self-disclosure is extremely limited (Cass, 1984). Individuals often fear that heterosexuals may cause trouble for them, particularly at school and work. Persons in this stage act as heterosexuals at their place of employment or school out of fear (Cass, 1979). The last two stages, identity pride and identity synthesis, are marked by gay persons beginning to form positive self-images and identities.

Stage five: Identity pride. Individual's in the identity pride stage strongly identify with other gay persons and feel angry about how society treats gays as a whole. They often split the world into gays and heterosexuals and delve only into the gay realm (Cass, 1984). These individuals feel proud of being a gay or lesbian person and start to enjoy living as one. They no longer feel a need to hide and are often conspicuous about being gay, participating in activities such as marches or wearing slogans such as "how dare you presume I'm heterosexual" (Cass, 1979).

Stage six: Identity synthesis. Identity synthesis, the final stage in developing a positive gay identity, is marked by gay persons understanding that not all heterosexuals are bad. They spend time with gay and heterosexual persons and feel comfortable in both

domains. Furthermore, respect for both gays and heterosexuals is required (Cass, 1979). When living alongside both gays and heterosexuals, they are more comfortable with their gay identity and do not feel the need to flaunt or hide it. Lastly, they are able to see their sexuality as only one part of their overall identity (Cass, 1984).

Limitations of Cass's model. Cass's model has many limitations. She published her model with little research support in 1979. It was not until 1984 that Cass performed a small research study in an attempt to support her theory. Although this study lent support to parts of her theory, it also indicated that fewer than six stages may exist. In her 1984 publication, Cass pointed out that her theory needed to be re-tested and stated that she was in the process of doing an item analysis to refine her questionnaire and define factors. Although this statement was made, no other research was ever published by Cass about her model. For a model that is widely accepted, it has sparse empirical support (Cass, 1984).

Eli Coleman: Homosexual Identity Model. Coleman (1982) defined five stages of same sexual identity development that were based on many of the assumptions in Cass's work. Coleman's goal was aimed to help gay and lesbian individuals develop positive self-concepts.

Stage one: Pre-coming out. Coleman believes that a person's awareness of same-sex interests and feelings is a slow and often painful process. Persons who are aware of the feelings are likely to reject, dismiss, and repress them. The pre-coming out stage represents persons who are becoming aware of their same sex attractions. The increasing awareness can have a negative effect on one's self-concept and these individuals often develop negative conceptions of themselves due to society's negative ideas about gays. Persons in this stage

often feel rejected by others indirectly; they feel they are not able to live up to the expectations of their friends, families and, religious figures. Feelings of rejection and inadequacy often lead to depression and social isolation. Coleman notes that the conflict of the pre-coming out stage can be resolved in many ways. Persons may commit suicide; others hide their sexual orientation from others and themselves and attempt to live as heterosexuals. Coleman believed that the only healthy resolution to the developmental conflict of this stage is for persons to acknowledge their sexual orientation to themselves.

Stage two: Coming out. The first developmental task of this stage is for persons to admit their sexual orientation to themselves. Once they acknowledge their same sex attractions, the next developmental task is to tell others. Often the first person told is a close friend, therapist, or minister. Many theorists have noted the importance of self-acceptance and disclosure to others in relation to the overall mental health of the gay person (Coleman, 1982; Dank, 1973; Weinberg & Williams, 1974). Equally important is how the recipient of the disclosure reacts. Acceptance of the individual's sexual orientation by significant others will help to increase the gay person's self-esteem whereas rejection can have extremely negative consequences. A negative response may further damage one's self-concept, pushing the person back into the pre-coming out stage and possibly into a deeper depression.

Stage three: Exploration. The exploration stage refers to the time that gay persons explore and experiment with their sexuality. Gay persons make contact with the larger gay lesbian, bisexual and transgender population in this stage and explore new ways of meeting others and learning different types of interpersonal skills similar to all adolescents developing a sense of themselves. This stage involves both social and sexual exploration and can be

seen as a making up for lost time. Both persons in the stage and outsiders often misrepresent the exhibited behaviors as promiscuous, especially if individuals are in their 30's or older when they enter this stage. Coleman believes that persons in this stage need to retrace some of the developmental tasks they missed during adolescence. He also notes that males often engage in more sexual exploration than females in this stage.

Stage four: First relationship. This stage begins when gay men and lesbians believe themselves to be capable of loving someone and being loved. They often begin to yearn for a more stable and committed relationship. Intimacy is the primary need to be fulfilled in this stage. Although individuals in this stage yearn for a relationship, the first one can be disastrous. Not having much experience with long-term relationships, they may still hold on to some of the beliefs they had in the pre-coming out stage such as gay relationships cannot be stable. In time, when they realize relationships are based on mutual trust and freedom, and they continue building upon their own self-acceptance, they will begin to move to the last stage.

Stage Five: Integration. In the Integration stage, individuals gain confidence in their ability to maintain long term committed relationships. They are able to handle rejection and other life events in a positive way and are less likely to be depressed, lonely or suffer from low self-esteem.

Anthony D'Augelli: Developmental Model of Homosexual Identity Formation.

A researcher who presented a life span approach similar to Cass's was D'Augelli (1994). His model emphasized six developmental tasks, from exiting a heterosexual identity to entering a gay community. Although his model is not widely used, he coined two terms that are

mentioned in the research literature. The first, “developmental plasticity” is how a person responds to the environment. The second, “inter-individual differences” highlights the developmental situations that are unique to each individual person (Stevens, 2004).

Developmental plasticity and inter-individual differences. The terms developmental plasticity and inter-individual differences were derived from a life-span approach to human development. Baltes (1987) and Lerner (1991) argued that human development is an interactive process that is not determined by biology but by the environment in which people live. They believe that human development cannot be plotted along a rigid line that has strict rules relating to age or milestones such as childhood or adolescence. Similarly, since all people react differently to similar experiences, and no two people live in the same exact environment, the impact of environment and experiences affects all people differently (Rivers, 1997). Figure 1 represents a visual representation of D’Augelli’s model. Each box represents different aspects of a GLBT person’s life and shows how each area effects the others. For example, a person’s interactions with their family may influence their beliefs about social customs. This interaction then helps to form the person’s identity. To understand D’Augelli’s model it is crucial to understand that all people experience situations differently. Although little is written about his model many authors note the importance of his work as he later went on to research in a different area within the GLBT community.

Ruth Fassinger: Individual and Group Homosexual Identity Development. Ruth Fassinger (1997), approached gay identity development in a unique way. She believed that existing gay identity development models failed to acknowledge that two parallel and

reciprocal processes occur during identity development. They are individual sexual identity development and group identity development (McCarn & Fassinger, 1990).

Individual sexual identity development. According to Fassinger (1997) individual sexual identity development consists of four stages.

Awareness. The awareness stage involves feelings of confusion, fear and bewilderment. Persons in this stage are aware of feeling different from heterosexuals.

Exploration. The exploration stage involves persons exploring ones feelings, often sexual and about others of the same-sex. These persons often feel excitement, longing, and wonder as they begin to explore their new sexuality.

Deepening commitment. Those who are in this stage begin to have a deeper commitment to themselves as gays. They understand that recognizing their same-sex preferences implies their gay orientation. Fassinger (1997), notes that persons in this stage are often navigating their commitment in a heterosexist and homophobic world, which requires them to address tasks in the group membership identity model. Anger and sadness, as well as an eventual acceptance of self, occur in this stage

Internalization synthesis. In the final stage individuals fully internalizes their same-sex desires as a piece of their entire identity. They feel internally consistent and experience feelings of unwillingness to change their sexual orientation and a sense of contentment and pride about their identity occurs.

Group sexual identity development. According to Fassinger (1997), group identity development consists of four stages.

Awareness. The group awareness phase involves persons realizing that different sexual orientations exist among people. This realization may force individuals to acknowledge the existence of heterosexism and may produce feelings of confusion and bewilderment.

Exploration. Persons in the exploration stage begin to explore their own attitudes and beliefs about gay and lesbian people as a group as well as pondering the possibility of their own membership in that group. Feelings of anger, anxiety, and guilt may occur as their awareness of heterosexism increases. These persons may also feel excitement, curiosity, and joy as they explore the existence of others like themselves.

Deepening commitment. In this stage one, becomes more committed to involvement in the lesbian and gay community and understanding the consequences that involvement may entail. These experiences are often affectively reflected in a combination of many different emotions including pride and excitement, but also rage at the injustices many gay persons face. Identification with the gay and lesbian community as well as a rejection of heterosexual society occurs.

Internalizations synthesis. In this stage, gay persons have fully internalized their identity as a member of a group that is oppressed into their own self-concept. The synthesis may increase one's feelings of comfort, security, and fulfillment and help them to maintain their sense of self as gay across many contexts. In this stage it is also likely that disclosure of one's sexual orientation has occurred, depending upon individuals circumstances. Figure 2 is a representation of Fassinger's model.

Gay and Lesbian Affirmative Development (GLAD) Model of Homosexual

Identity Formation. More recently, John Marszalek and Craig Cashwell developed the Gay and Lesbian Affirmative Development model (GLAD). The GLAD model combines Cass's HIF model with Allen Ivey's (1990, 1993) developmental counseling therapy (DCT). This model is different from others because it was designed to help professionals working with GLBT clients (Marszalek & Cashwell, 1999). The GLAD model provides specific therapeutic techniques and interventions for GLBT clients depending upon their gay identity formation (HIF) stage (Marszalek & Cashwell, 1999).

The GLAD model differs from other HIF models because it is based on cognitive theory. Cognitive theories have been in existence for many years and have high levels of validity and reliability. Ivey's therapy is based on Piagetian cognitive behavioral and developmental theories, as well as Platonic philosophy. Ivey believes that Piaget's cognitive development theory can be applied to adolescents as well as adults, instead of only children. Similar to Piaget, Ivey believes that not all people will reach the highest levels of cognition, and DCT was based upon this premise (Marszalek & Cashwell, 1999).

Developmental counseling therapy. DCT has four major premises (Rigazio & Ivey, 1990). The first premise states that clients present different levels of cognitive developmental understanding during counseling sessions. Secondly, it is useful for counselors to match their interventions with the clients' cognitive level. The third premise states that at times it is important to mismatch interventions with cognitive level to help the client explore new dimensions of thought. Lastly, Rigazio & Ivey (1990), believe that existing theories and therapeutic techniques such as humanistic and psychodynamic

approaches focus on varying cognitive levels but not in a systematic sequence that enhances cognitive functioning. Marszalek and Cashwell believe that using Ivey's techniques would help to promote positive gay identity formation (HIF) in clients.

Development Counseling Therapy level one. The first level of Ivey's theory is the sensorimotor level. Ivey describes this level in terms of how individuals respond to an event. Clients who focus on pain and sadness following a death and cannot concretely describe the event operate at an early sensorimotor level (Marszalek & Cashwell, 1999). The second sub level of the sensorimotor level was taken by Ivey from Piaget's pre-operational stage. Ivey believed this to be a later sensorimotor level characterized by irrational thoughts such as "should" or "ought" statements. "I ought to be perfect" would be an example. This level is also characterized by magical thoughts, such as believing that if one even thinks about the possibility of rain it might rain and ruin the day (Ivey, 1990, 1993). As individuals move to the next stage Ivey believes they begin to gain the ability to describe their own behavior, affect, and cognitions (Marszalek & Cashwell, 1999).

Development Counseling Therapy level two. Ivey's second level, concrete operational, describes individuals who use detailed and concrete language to label their experiences. Individuals in the early sub-level use language like, "At this moment I am happy" or "I am taking a test today." Persons in the later sub-level are able to use causal language such as, "If I finish my test, I will be happy." The difference between the concrete operational level and the next level, formal operational, is individuals in the latter are able to use abstract thinking to describe or understand experiences and emotions (Ivey, 1990, 1993).

Development Counseling Therapy level three. At the early sub-level, formal operational individuals reflect upon their concrete explanations of events and recognize patterns. For example persons who state, “Every time I take a test I get nervous” realize the connection between test taking and their feelings. Individuals in the later sub-level of formal operations are able to recognize patterns of patterns, understanding that patterns of thoughts, behaviors, and emotions can be related to one another. For example, “I seem to get nervous in many different situations when the situations are related to me thinking about failing” (Ivey, 1990, 1993). Although Piaget’s theory stopped after the formal operational level, Ivey theorized that adults are capable of post-abstract reasoning (Marszalek & Cashwell, 1999).

Development Counseling Therapy level four. Ivey’s last level, termed dialectic or systemic, incorporated Plato’s concepts of knowledge and intelligence to define what post-abstract reasoning is (Ivey, 1990, 1993). Adults in this level understand that knowledge they hold and their understanding of their experiences are constantly fluctuating. Ivey termed this process dialectic deconstruction. This occurs when current knowledge or beliefs, thought to be stable, are instead deconstructed, leading to new points of view. The new perspectives individuals have may lead to another cycle of cognitive development. Individuals who are capable of thinking at a late dialectic level are able to develop new insights. These insights are often reprocessed at the early levels before being processed abstractly (Marszalek & Cashwell, 1999).

Marszalek and Cashwell’s GLAD Model. The GLAD model combines Cass’s HIF model and Ivey’s DCT model. For visual representations of Cass’s and Ivey’s model with therapeutic interventions, see Figure 3. Figure 4 illustrates the eight stages of the GLAD

model. Marszalek and Cashwell believed that each level of Cass's stages had parallels to Ivey's theory.

Stage one. The first stage of the GLAD model is a combination of pre-identity confusion and early sensorimotor levels. Adults in this stage focus on their senses to understand sexual orientation. Individuals have little sense of themselves in relation to their own sexual orientation and are unable to separate themselves from feelings and beliefs that are acquired from their environments. Often, gay males who have progressed beyond this stage will make statements about feeling different from others and are not able to elaborate upon what was different.

Stage two. Individuals in the identity confusion stage, and late sensorimotor levels concentrate on specific aspects of themselves related to their sexual orientation such as their behaviors, affect, or cognitions. Sexual realizations about the same sex often lead to confusion. These individuals may actively use magical thinking to deny that they are gay, "I must be going through a phase", or "I am just admiring the same sex's body because I would like to look like that." Persons in this stage are unable to use concrete thinking to define their thoughts, feelings, or emotions as being those of gay persons (Marszalek & Cashwell, 1999).

Stage three. Identity comparison and early concrete operations represent the next level of the GLAD model. This level is distinguished by individuals beginning to acknowledge their same sex attractions as possibly being gay. They begin concretely expressing their feelings but do not state that they are definitely gay.

Stage four. Persons in the next stage are in an identity tolerance and late concrete operational level and can use logical analysis of their feelings, thoughts, and actions to say

they are probably gay. An example would be a person saying, “I am attracted to men, therefore I am probably gay.” They tolerate the possibility of being gay, feeling that gay is inferior to heterosexuality and make no commitment to a gay identity (Marszalek & Cashwell, 1999).

Stage five. In the identity acceptance and early formal operational stage adults begin to make a commitment to being gay. They recognize patterns in their behavior or feelings, such as “every time I fall in love with someone they are of the same sex.” Instead of using causal logic, they are using abstract thinking to make connections between their behavior and identity. These individuals are also more accepting of the idea of being gay.

Stage six. Persons in this identity pride and late formal-operational level are able to reflect on patterns in their lives. They begin to understand how thoughts, feelings, and experiences from the past can be connected to their gay identities. These individuals often feel anger when they realize that their past patterns, such as being closeted, may have been caused by internalized homophobia, which in turn was caused by a heterosexist society. They begin to feel more pride about being gay and start to spend more time with others in the gay community and less time with heterosexuals (Marszalek & Cashwell, 1999).

Stage seven. During the next level, identity synthesis and early dialectic thinking, individuals move from focusing exclusively on their gay identity to their overall identity. They realize that being gay is just one piece of their overall identity and begin to experience less anger towards how others react to them. They are also able to begin to form relationships with heterosexual people, whereas in prior stages they spent most of their time with gay people.

Stage eight. Although Cass did not define a stage beyond identity synthesis, Marszalek and Cashwell theorized that the final level of Ivey's theory, late dialectic and deconstruction, would consist of a late identity synthesis stage (Marszalek & Cashwell, 1999). Ivey described individuals in this stage as being able to "think about thinking about thinking" (Ivey, 1990, 1993). According to Marszalek & Cashwell (1999), gay individuals in this stage would be able to gain new insight into being gay.

Gay individuals who realize their overall identity can change and that throughout life they have insight into their inner selves can experience new awareness, and knowledge about themselves. As in Ivey's model, these new insights would first be understood cognitively at the sensorimotor level and processed at each level. An example of this would be individuals in the late dialectic stage being confronted with a situation that triggers feelings and thoughts about themselves, for instance being discriminated against. The thoughts and feelings help them to realize that they still have feelings of internalized homophobia. When these individuals process this information, they recycle through another developmental process by first experiencing these feelings and thoughts at the sensorimotor level. When Marszalek and Cashwell first presented their theory, there was no empirical evidence to support their claims. (Marszalek & Cashwell, 1999).

Discussion

Theories of gay identity formation have progressed from ones that attempted to treat being gay as a disease to those that aimed to help gay persons to develop a positive gay identity. Troiden's (1997) model and earlier models are mentioned in modern literature but are not accepted by most counselors who work with GLBT clients, due to the lack of

evidence to support the theories. Currently, Cass's (1984) model is used today because she moved away from the common perception that being gay was a disease to be treated. Her model is also lacking empirical research to support her theory and does not offer insight into bi-sexual or transgender identity development.

Other theorists including D'Augelli, Coleman and Fassinger who began their research career in GLBT identity development have changed their focus. D'Augelli's research focuses on bullying, school violence and the coming out process. Coleman's research covers numerous areas including HIV prevention, sexual compulsivity and psychiatric illnesses. Fassinger's research revolves around lesbians and the workplace as well as group identity. The shift from researching identity development to other topics may be due to the difficulties in studying gay identity, especially in the early stages.

Overall gay identity theories lack large sample sizes, generalizability to other populations such as males, and does not address how factors including; spirituality, culture, ethnicity or race may effect identity formation (Stevens, 2004). Researchers are limited in their understanding of the beginning stages of identity development because it is difficult to find individuals in the early stages of gay identity development since they have not yet accepted being gay as a part of themselves (Marszalek & Cashwell, 1999).

Connecting Eating Disorders and Homosexual Identity Formation Importance of Research

Gay, lesbian, bisexual and transgender (GLBT) persons are at a higher risk for many serious life altering events than heterosexual persons. GLBT youth are more likely to lack family support (D'Augelli, 1998), have more problems with their families and are more

likely to be expelled from their homes (Cochran, Stewart, Ginzler, & Cauce, 2002; Savin-Williams, 1994). They are also less likely to return home and have fewer resources. GLBT youth are more likely to end up homeless than their heterosexual counterparts and make up a large portion of the homeless population, at least 35 %. Not only are GLBT youth more likely to be homeless, amongst homeless adolescents they are more likely to be victimized, robbed, raped and assaulted. They are more likely to trade sex to help support themselves, which can lead to victimization and an increased risk of developing serious substance abuse problems. Many GLBT homeless youth are victims of parental physical abuse and have both mental and general health problems (Cochran, Stewart, Ginzler, & Cauce, 2002 ; Tyler, 2008).

Cass believed that persons in the early stages of her theory were more likely to have mental health problems than those in the later stages. The research reviewed about GLBT homeless youth and the risk of suicide amongst GLBT persons supports her belief. Suicide is the third leading cause of death among 10 to 19 year olds. Adolescents who commit suicide are often unable to synthesize solutions to the problems in their lives, and they lack the coping strategies that are necessary to deal with stressors. They see suicide as a solution to the problems they face, including family discord, rejection and failure. In GLBT adolescents the realization of one's, sexuality and the acceptance of one's sexual orientation is not only a stressor but often results in a loss of coping resources such as friends and family. Rejection by families and feelings of failure often occur in GLBT youth. Research studies addressing GLBT adolescents and suicide have shown that 20% to 40% of GLBT youth have attempted suicide (Kitts, 2005). Suicide in the GLBT community does not only occur in the adolescent

population. Other research indicates a significant increased risk for suicide amongst gay males (McAndrew & Warne, 2010).

GLBT persons experience an increased risk for depression, homelessness, and suicide, demonstrating the importance of increasing research with GLBT persons to determine how these problems can be lessened. As noted earlier research findings have indicated an increased risk for gay males and developing eating disorders. Since Cass (1997) believed that persons in the later stages of her gay identity development model are mentally healthier, it may follow that these persons would be less likely to exhibit eating disorder symptomology. Therefore the goal of the present research was to expand the literature in both eating disorders and how gay identity stage level may influence eating disorders.

CHAPTER 3

Method

Participants

The research population included in the proposed study were self-identified non-heterosexual males which included three categories: gay, bisexual and other males. Gay and bisexual males were defined by, males who are attracted to other males and/or those who engage in same sex sexual behaviors. Other was defined as males who did not self-label themselves as gay or bisexual but whom had sexual feelings or thoughts toward members of the same biological sex or who engaged in sexual behaviors with members of the same sex. A sample of participants was recruited using an online list serve, social media including Facebook and Twitter, and a survey tool, as well as through other University's GLBT list serves who are willing to distribute the survey link to their students.

Persons who were members of the North Carolina State University (NCSU), Gay, Lesbian, Bi-sexual and Transgender Center list serve and Facebook had the opportunity to participate in the proposed research. An email requesting their participation in an online survey was emailed to all list serve members through a private list serve email, a private Facebook email and a Twitter posting.

The list serve, Facebook group and Twitter account were pre-existing and included persons of differing age, race, gender, and sexual orientation demographics. The list serve consisted of current and former North Carolina State University students, faculty, staff, and community members. The Facebook group and Twitter account consisted of persons from around the world who have added themselves to the NCSU GLBT Facebook group and

Twitter account. Since anyone can sign up to be a member of the list serve, Facebook group or Twitter account the researcher was unaware of any background information about the participants, with the exception of information provided in the demographic section of the survey. The sample consisted of mostly college aged males; however, older males may also be included in the results due to the nature of the list serve, Facebook group and Twitter account. Efforts will be made to include only participants who are eighteen years or older due to the nature of the informed consent process.

Instrumentation

Survey research. A survey research design can be used to obtain descriptive quantitative information about a population and is non-experimental in nature. The present study population includes members of the NCSU's GLBT center list serve and Facebook group. Survey research has many advantages. Surveys offer an efficient means for collecting information from a large number of respondents and flexibility since a wide variety of information can be collected. Survey research also provides freedom from many errors if the survey is standardized. Surveys offer a cost effective means of administration that is easy to administer.

There are also disadvantages to using surveys in research projects. Survey results are dependent on participant's motivation, honesty, memory, and their ability to respond. Participant's answers may be biased and participants may aim to present themselves positively rather than truthfully. Lastly, there can be response bias amongst the participants due to the possibility of responders being inherently different from those who did not respond. Clearly defining the constructs to be measured, the participant sample, data

collection methods, and data analysis are essential for the researcher. The two most important ingredients of descriptive research are the adequacy of the sample and the psychometric properties of the measures (Heppner, Kivlighan & Wampold, 2007).

Research measures. Three instruments were used to measure the two constructs being studied. In order to increase construct validity two instruments were used to measure eating behaviors. The first construct, eating behaviors was assessed using both the Eating Attitudes Test 26 (EAT-26) and the Mizes Anorectic Cognitions Questionnaire Revised (MAC R). Eating disordered behaviors are defined as behaviors that anorexic and bulimic persons engage in that normal control persons do not, for example purging. The second construct, gay identity development level was measured using the Gay Identity Questionnaire (GIQ). Although participants will be responsible for identifying their sexual orientation in the demographic portion of the survey, for the purposes of this study gay males were defined as men who prefer men to women for romantic and sexual partnerships. Bisexual males were defined as men who have and interest in engaging with either men or women in regards to romantic or sexual partnerships. Participants were also given the option of checking other. This was included to encourage participants whom were not comfortable identifying as gay or bisexual to participate in the study.

Eating Attitudes Test-26. The first survey instrument participants completed was the Eating Attitude Test 26 (EAT-26). The EAT-26 was used to measure eating behaviors. The EAT-26 was developed by Garner, Olmstead, Bohr, and Garfinkel (1982) after revisions were made to their original instrument the Eating Attitude Test (Berland, Thompson & Linton, 1986). The EAT-26 is the most widely used measure of the symptoms and concerns

characteristic of eating disorders (Berland et al., 1986); (Yoon & Funk, 2008). Using the EAT-26 alone does not yield an eating disorder diagnosis, however it is a valuable screening instrument. It is recommended that persons who take the EAT-26 and score at or above the cutoff score of 20 be referred to a specialist for a diagnostic interview (Yoon & Funk, 2008).

The original 40 item EAT was developed to assess anorexics behaviors and attitudes (Berland, Thompson & Linton, 1986). Garner and Garfinkel (1979) used five criterion groups including anorexics (AN), normal females (FC), normal males (MC), obese females (OF), and recovered anorexics (RAN) and collected normative data for each group. Unpublished normative data have also been collected on individuals diagnosed with binge eating disorder (BED) and bulimia nervosa (BN) (Williamson, Anderson, Jackman, & Jackson, 1995). Each item is scored using a six point likert scale. Participants respond to each question, for example, “I am terrified about being overweight or I avoid eating when I am hungry” then score each item using the following scale. Participant responses of sometimes, rarely, and never receive zero points, whereas three points are given for always, two for usually and one for often. The sum of the individual items score result in a total score. Garner et al. (1982) suggested cutoff scores of 30 (EAT) and 20 (EAT-26) to identify disordered eating attitudes and behaviors.

A factor analysis revealed three main factors that contribute to eating disorder behavior and attitudes. The factors are dieting, bulimia and food preoccupation, and oral control. The authors examined the 40-item instrument and found that 14 of the items did not fit into any of the factor categories identified during the factor analysis. The 14 items were

eliminated from the instrument which created a revised version of the EAT, now named the EAT -26 (Garner et al., 1982).

Correlational analyses of both instruments were conducted. The authors concluded that the highly reliable correlations implied that the EAT -26 could be substituted for the original EAT (Berland et al., 1986). Other research has been conducted to determine the correlation between the EAT -26 and other eating disorder inventories including comparisons to the Eating Disorder Inventory (EDI) and the Restrained Eating Inventory (EI) (Berland et al., 1986) (Williamson et al., 1995). Research has shown that scores derived from the total EAT-26 score are similar to those from the EDI and EI, showing that the EAT-26 is a reliable and valid instrument. Garner et al. found a validity coefficient of .87 ($p < .001$) suggesting that the participants total score on the EAT predicted group membership. The alpha reliability coefficient of .94 suggests high internal consistencies reliability on the test given to anorexic and normal participants (Garner et al., 1982). The EAT has been found to differentiate eating disorder groups (AN, BN, and BED) and nonclinical controls (Garner & Garfinkel, 1979); (Prather & Williamson, 1988); (Williamson, Cubic, & Gleaves, 1993). The EAT has also been found to differentiate binge eaters from anorexics and bulimics (Prather & Williamson, 1988) but has not been found to differentiate samples of anorexics and bulimics (Williamson et al., 1993)

Mizes Anorectic Cognitions Revised. The second instrument used to assess eating disorder symptomology was the Mizes Anorectic Cognitions Revised (MAC-R). Many assessment methodologies and instruments exist that assess eating disorder cognitions, including pencil-paper questionnaires. The only questionnaire whose psychometric

properties have been extensively studied however is the MAC (Mizes, Christiano, Madison, Post, Seime & Varnado, 2000). The original questionnaire, the Mizes Anorectic Cognitions (MAC), was shown to have good internal consistency and test-retest reliability, stable factors, concurrent, construct and predictive validity and is useful in determining the effect of cognitive behavioral treatment on eating disorder patients. Both scales are written at a sixth grade reading level and are suitable for middle school children through adults. The MAC and MAC-R are designed to assess the cognitions of all eating disorders including; anorexia, bulimia, and binge eating disorder (Williamson et al., 1995). Although the original scale had good psychometric properties, the authors noted that refining the scale was beneficial to refine the three subscales that the MAC measured.

The original MAC consisted of 33 items that measured three dimensions of eating disorder cognition. The three dimensions are; strict weight regulation and fear of weight gain, self-control as the basis of self-esteem, and weight and eating behavior as the basis of approval. The three dimensions are based on Garner and Bemis's (1982) three areas of cognitive distortions. Items on the MAC are rated using a 5-point Likert scale. Participants respond to each item circling strongly disagree, mildly disagree, neutral, mildly agree and strongly agree. Two questions include "If I don't have a specific routing for my daily eating I'll lose all control and gain weight" and "If others comment on my weight gain, I won't be able to stand it" (Mizes, et al., 2000). Strongly disagree responses are given one point with each response on the likert scale given one more point so that strongly agree responses are given five points. Similar to the EAT-26 the Mizes-R individual item scores are summed to give a total score. Higher scores indicate cognitions that are more dysfunctional. During the

reevaluation of the MAC 24, additional items were added to explore. In order to reduce questionnaire items, the 57 individual questions were examined for psychometric accuracy. All items, which did not correlate the total score of at least $r \pm .30$ were eliminated. A factor analysis was conducted on the remaining items and eight items were chosen for each of the three factors (Mizes et al., 2000).

The coefficient alpha for the total score MAC-R was .90. Concurrent validity was demonstrated by comparing the MAC-R total scores to scores from the Eating Disorder Inventory (EDI) and the Restraint Scale, two commonly used eating disorder inventories. The correlation between the MAC-R and the original MAC was also high (.95). The authors note that the MAC-R has improved internal consistency in comparison with the original MAC. The three subscales now contribute equally to the total score and contribute unique information. Overall, the MAC-R offers information that is not covered by the EDI or the Restraint Scale and has been tested on normal and clinical populations. The MAC-R is useful in assessing changes in patients after cognitive treatment and can be used to assess all eating disorders (Mizes et al., 2000). The Mizes Anorectic Cognitions Questionnaire has also been found to be moderately correlated with the EAT: $r = .64$ (Mizes, 1988).

Gay Identity Questionnaire. The last instrument participants completed was the Gay Identity Questionnaire (GIQ) (Brady & Busse, 1994). The GIQ was developed from the basic tenets of Vivienne Cass's (1979) Homosexual Identity Formation (HIF) model. The GIQ is a brief measure that can be used by researchers and clinicians to identify gay males in the different stages of gay identity formation. The questionnaire is derived from Cass's original Homosexual Identity Questionnaire; however, it offers a shorter version with similar

results. The test was constructed by outlining Cass's HIF model. One hundred items were developed after analyzing the different stages of the HIF model (Brady & Busse, 1994).

Brady and Busse established inter-rater reliability by using four raters who studied the HIF model independently. All of the items that were included in the pilot instruments were agreed upon by at least 75% of the raters. This percentage resulted in a 63 item pilot instrument. The pilot-tested individual items were also tested to establish reliability. While testing the reliability of each item the number of items was further reduced.

After another administration of the pilot instrument to participants, the questions wording were adapted and the final version of the Gay Identity Questionnaire was established. Each item is specific to one of the six HIF stages. For example if a participant answered true to the question "I doubt that I am gay, but still am confused about who I am sexually" the response is indicative of a person in stage one. If a person answers true to "I am very proud to be gay and make it known to everyone around me," the person would be in stage five of the HIF. Participant's answers are tallied for each stage and their stage level is determined by which stage they had answered true most frequently. If participants scored equally in more than one stage then they are classified as "dual stage." It is due to many participants receiving a "dual stage label" that Brady and Busse as well as other researchers believe that fewer than six stages exist.

Two hundred and twenty-five participants completed the final version of the GIQ. According to Cass, as persons move through the stages of HIF their self-perception changes. In the early stages of HIF persons self-perceptions are negative. Cass predicted that, as people move through the stages, their self-perceptions become more positive. Cass also

predicted that a person's psychological wellbeing was less stable in the early stages of HIF and more stable in the later stages. Brady and Busses tested the GIQ's measurement of HIF Stage and perceived psychological well-being and gay adjustment. Findings from these comparisons resulted in the authors stating that the GIQ is useful as a brief measure for identifying a participant's stage of gay identity formation. Brady and Busse also noted that further studies were needed to increase generalizability and external validity.

Another limitation of the questionnaire is that not enough participants were in the first two stages of the HIF model. This finding was similar to those of other researchers who have tested Cass's model. Since Cass's model was first developed, it has been debated if fewer than six stages exist and research has indicated that there is a possibility of two or three distinct stages instead of six. It is due to this finding that for the current research project participants will be divided into two groups after filling out the GIQ to compare their HIF stage and their scores on the MAC-R and EAT-26.

Demographic Questionnaire. The demographic questionnaire used for the pilot study included brief demographic information as well as a brief online eating disorder assessment tool (See Appendix C).

Pilot Study

Pilot study participants. A pilot study was conducted in the fall of 2009 at North Carolina State University. The study addressed differences between gender, sexual orientation, and eating habits. Participants who received the North Carolina State University (NCSU), Gay, Lesbian, and Bi-sexual and Transgender Center newsletter through a list serve participated in the survey pilot study. Participants consisted of current and former North

Carolina State University students, faculty, staff, and community members. In order to prevent bias the researcher was blind to background information about the participants except information provided in the demographic section of the survey. All participants were 18 years or older. In order to participate in the survey participants identified their gender identity (perceived gender), biological sex, and sexual orientation. Participant responses were planned to be grouped into six categories however, eight categories emerged.

Pilot study instrumentation. Participants eating behaviors were measured using a twenty question dichotomous survey. The purpose of the study was to ascertain if there were differences between each of the groups eating behaviors. Participants responded to 20 statements about their eating behavior during the last year. Positive responses were measured with a check mark and participants who checked five or more statements were considered to be at risk for an eating disorder. The survey was created by eating disorder specialists at South Coast Medical Center's (2009) eating disorder program and was designed as an educational tool. A copy of the survey is located in Appendix A.

Pilot study procedure. Data collection and analysis procedures for the pilot study are presented below.

Pilot study data collection. Participants completed the survey using Survey Monkey, an online survey tool. The survey was emailed to the North Carolina State University GLBT Center's mailing list twice, which at the time of mailing consisted of approximately 650 members. It is important to note that many assessment tools for eating disorders are based on female diagnostic criteria and are not normed for use with males, however; males were included in the pilot study. After completing the survey, the participants were given further

contact information for the researcher and NCSU's counseling center for follow up. To control for any bias participants were told that the survey addressed eating behaviors.

Pilot data analysis. Data from the survey were grouped into eight categories based upon gender identity, biological sex, and sexual orientation. Each survey question was analyzed to determine the mean number of participants who responded yes or no, in each of the aforementioned categories. An overall score was calculated for each participant group to determine the average number of participants in each group who were engaging in eating disordered behaviors. This analysis allowed a comparison between each question and each group to determine which group was the most likely to exhibit eating disordered behavior and the types of behaviors reported by each group.

Pilot study results. The survey was completed by 105 participants. Twenty-one participants did not complete the survey. These data were not included in the findings since the entire survey was not completed. The first part of the survey addressed biological sex, gender identity, and sexual orientation. Biological sex was defined as the gender that a participant had at birth and gender identity was defined as what gender a participant viewed themselves as being. Forty-nine biological males and 56 biological females participated in the survey, one biological female identified their gender identity as male, and another identified it as other. Three biological males identified their gender identity as different from their biological sex, two as female, and one as other. For the purposes of the present study, the five participants who indicated a difference between their biological sex and their gender identity will be termed transgender.

The participants also identified their sexual orientation. Due to the nature of sexual orientation, being societally based the researcher-grouped participants by biological sex, then gender identity and lastly sexual orientation. Initially six groups were defined in the proposal, however since some participants identified their biological sex as being different from their gender identity, eight different groups of participants emerged. Participants were grouped to include Bi-Sexual Female (Bi-Fe), Heterosexual Female (He-Fe), Lesbian Female (Le-Fe), Transgender Female (Tr-Fe), Bi-Sexual Male (Bi-Ma), Heterosexual Male (He-Ma), Gay Male (Ga-Ma), and Transgender Male (Tr-Male).

Of the 49 biological males who participated, five were heterosexual, two were bisexual, 39 were gay, and three were transgender. Of the 56 biological female respondent's, 16 identified their sexual orientation as heterosexual, 18 as bisexual, 20 as lesbians and two as transgender. The last information the participants provided was their responses to a 20-item checklist that asked questions about their eating behaviors. Although the participants were unaware that this checklist is used as a basic self-diagnostic tool for eating disorders, participants who checked five or more items would be considered at risk for an eating disorder.

Approximately, 71% of Bi-Sexual Females, 39% of gay males, 25% of heterosexual females, 20 % of heterosexual males, and 15% of lesbian females checked five or more responses, therefore they would be considered at risk for an eating disorder based. As mentioned previously national statistics show that eating disorders occur more frequently in females (approximately 10% of females suffer from an eating disorder) than in males, however little research has addressed what types of females or males are at the most risk.

Many of the results were as hypothesized. Heterosexual females were more likely to check five or more items on the survey than heterosexual males (25 % compared to 20%). Gay males were more likely than heterosexual males to be at risk for an eating disorder (39% compared to 20%) and gay males were more likely to check five or more items than heterosexual females (39 % compared to 25%). Results may also indicate that sexual orientation in females may play a role in eating disorder risk as well. Only 25% of heterosexual females surveyed in comparison to 71% of bisexual females checked five or more items on the survey. Lesbians were less likely than heterosexual males or females and gay males to check more than five items. Survey responses for bi-sexual males and both transgendered females and males showed that these three groups did not check five or more questions. Further analysis could be done for each of the questions to determine which group was the most likely to exhibit each of the eating disorder risk factors.

Procedure

Data collection. The study was approved by the NC State Institutional Review Board and agreement to begin the survey indicated informed consent (See Appendix D). Participants completed the three inventories and a brief demographic survey using Survey Gizmo, an online survey tool. The Survey Gizmo link allowed participants to access the informed consent form and all portions of the survey. The survey began with the informed consent statement and a demographic questionnaire which included questions regarding participants concern about their appearance in different situations. The three instruments that will be used to measure research constructs will also be part of the questionnaire. Using Survey Gizmo allows anonymity of participant's information since the researcher will not

know who is filling out the survey. Survey Gizmo also offers a tool to hide the IP address of all participants further protecting their anonymity, which was used.

All participants received the same survey and informed consent form. The participants were emailed the link to the study through a preexisting list serve at North Carolina State University. Informed consent was gained by including an informed consent form in both the email containing the survey link and as the first page of the survey. Participants were notified that by completing the survey and submitting it they are in agreement with the information outlined in the informed consent form.

All survey participants indicated that they were over 18 years of age in the demographic portion of the questionnaire. After completing the survey the participants were given further contact information for the researcher and NCSU's counseling center for follow up if the participants were concerned about their own, or another persons' eating behaviors. The link to the survey was also given to professors who are willing to have their students participate in the survey. To control for any bias, the participants were only told that the survey addresses eating behaviors.

Since the list serve consisted of people of various demographics and the researcher had no pre-existing demographic information for them, it was not possible to obtain a survey response rate. The survey was given to all list serve members, however since the research question only addresses non-heterosexual males, only members who were non-heterosexual males could participate. It is unknown how many members of the list serve are part of that population since the list serve is open to all people. To increase the response rate the survey was sent out multiple times.

Data analysis. The data was collected and analyzed to provide comparisons of participant's scores on eating behavior questionnaires and participant's scores on the GIQ. Participants scores on the GIQ were compared to their scores on both the EAT-26, MAC-R and information they provided in the demographic portion of the questionnaire. Participant's sexual orientation was also compared to their GIQ results. A secondary analysis included a correlation between the EAT-26 and MAC-R.

Participant's scores on the GIQ were grouped into three categories instead of Cass's original six. Participants in stages one and two, three and four and five and six were grouped into three groups instead of six. A comparison of the three groups, participants in stages one (previously one and two), participants in stage two (previously three and four) and participants in stage three (previously five and six) was conducted to determine if a difference between eating attitudes and behaviors exists between the two groups. A one way ANOVA was used to compare the means of the three groups. A one-way ANOVA is normally used to test for differences between at least three groups whereas as t-test is normally used to compare two groups (Gosset, 1908).

In order to determine sample size, three power charts were consulted. In order to report results with 95% confidence with a confidence interval of 10 or 15, 96 or 43 participants would be needed respectively (Survey Systems, 2010). According to Cohen (1988) to report a medium size effect for an ANOVA with two degrees of freedom 64 participants would be needed. According to Hepner et al., (2007) to account for .10 of variance in a research design with three independent variables and have a medium level of power with an alpha of .05, 56 participants were needed. Given the unique population being

studied, non-heterosexual males, who account for a small percentage of the overall population the goal for participant sample size, was between 43 – 64 participants. One hundred and forty-two participants completed the study.

CHAPTER 4

Results

Participants

Participants included in the results completed all portions of the survey. The survey consisted of four measures and a demographic questionnaire. All participants were at least 18 years of age and non-heterosexual, biological males. Participants were included only if they were biologically male, cisgendered and if they choose bisexual, gay or other for their sexual orientation. The term cisgendered is relatively new, first appearing in research literature in the last five years. Schilt and Westbrook (2009) defined cisgender as a label for “individuals who have a match between the gender they were assigned at birth, their bodies and their personal identity.” Participants who did not complete all of the questionnaires, who identified themselves as biologically female or who identified themselves as heterosexual were excluded from the results. Participants self-disclosed their sexual orientation by choosing one of four options.

The participants included 27 bisexual males (19%), 106 gay males (74.6%) and nine males (6.3%) who chose other. The demographic portion of the survey was designed to allow participants who may be uncomfortable labeling their sexual orientation as gay, therefore the 9 males who choose “other” were included in the results. The total number (N) of participants equaled 142 (See Appendix A for Table 1).

Inventories

Demographic questionnaire. Participants were asked questions in the demographic questionnaire which included participants grooming habits and concern about their

appearance in different settings including at work, with friends, when on a date or when out at a club or bar. A mean score of concern about appearance was calculated by using a likert scale and assigning each answer a score. For example, participants who answered they were always concerned about their appearance when going out on a date would receive a five whereas participants who answered they were never concerned about their appearance would receive a zero. A mean score was then calculated by averaging the scores for every question.

EAT 26 statistical summary. The participants completed two eating assessments. The Eating Attitude Test 26 (EAT 26) is used as a generic eating disorder risk assessment and is not intended to provide a diagnosis, and was used similarly in the present study. If used as a risk assessment tool the authors suggest that all participants who score 20 or above seek evaluation by an eating disorder professional. The EAT 26 also incorporates a brief behavior questionnaire, which was not used for this study as the purpose was not to refer persons with high scores to treatment.

All participants in this study completed the 26-item likert scale questionnaire. The EAT-26 surveys were scored by the researcher using the recommended scoring system. Since the EAT-26 is not a diagnostic test the participant's scores were not used to determine if they had an eating disorder. Participant's EAT-26 scores were compared to participants MAC-R scores and identity levels. Participants EAT 26 scores ranged from zero to 35. The mean (*M*) and standard deviation (*SD*) were respectively (*M*= 8.77), (*SD* = 8.44). Means and standard deviations for participants respectively were, bisexual males (*M* = 8.19), (*SD* = 5.23), gay males (*M*=8.63), (*SD* = 8.77), and other males (*M* =12.22), (*SD* = 11.45).

Participant scores were grouped into six numerical categories and can be found in Appendix A, Table 2.

MAC-R statistical summary. The second eating assessment completed by participants was the Mizes Anorectic Cognitions Questionnaire Revised (MAC-R). The MAC-R is used to assess the cognitions of patients' with eating disorders. The MAC-R is also used to predict relapses in patients' diagnosed with eating disorders. The MAC-R was used in the present study because it addresses cognitive processes, similar to Marzalek and Cashwells GLAD model of Gay and Lesbian Identity Development. Participants completed the assessment and scores were calculated by the researcher using the recommended scoring protocol. Participant's scores ranged from 45 to 124. The sample mean (M) and standard deviation (SD) were respectively ($M= 83.83$) ($SD = 14.43$). Means and standard deviations for participants respectively were bisexual males ($M= 77.81$), ($SD = 12.62$), gay males ($M= 85.03$), ($SD =14.33$), and other males ($M = 87.78$), ($SD = 17.32$). Participant scores were grouped into eight categories and can be found in Table 3.

GIQ statistical summary. All participants completed the Gay Identity Questionnaire. Results were calculated by the researcher using an altered version of Cass's six-stage model of gay identity development. Previous research demonstrated that homosexual identity development occurs in fewer than the six stages Cass researched, therefore researchers suggest using a two or three stage model. For the purpose of the present study, a three stage model was used as suggested by Brady and Busse (1994).

The participants scores were calculated using Cass's traditional method and all participants were placed into one of the six stages. A participant's stage was determined by

calculating which stage they scored the most points in. A problem with this method occurs when a participant falls into more than one stage, making it difficult to assess which stage they are in. This problem is one of the reasons that researchers believe that some of the stages should be combined so that fewer stages exist.

An example of a dual stage participant is as follows, participants A scores a five in stage one, two and three and zero in four, five and six. Cass's scoring method makes it impossible to determine which stage the participant is in since there is no distinct highest scoring stage. Neither Cass nor Brady and Busse give suggestions as to how to determine the stage level of dual stage participants. In the present study participants who fell into more than one stage were placed into the lowest of the multiple stages they fell into. Using the previous example a participant who scored five, five, five, zero, zero, zero in the respective stages would be labeled as being in stage one. The next step was to place all of the participants into a three stage model.

Participants who placed in stages one and two of Cass's model were labeled stage one, participants in stage three and four were labeled stage two, and participants in stages five and six were labeled stage three. Stage one contained 14 participants, eight bisexual males, 1 gay male and 5 males who identified their orientation as other. Stage two contained 23 participants, seven bisexual males, 15 gay males and one male who identified their orientation as other. Stage three contained 105 participants, 12 bisexual males, 90 gay males and three males who identified their orientation as other. The mean identity for all participants stage was ($M = 2.64$) and the standard deviation was ($SD = .656$). A shortage of participants in the first two stages occurs frequently in research with gay identity

development theory. Due to the nature of the coming out process, it is unlikely for participants to label themselves as gay if they are in the early stages.

Correlation Between EAT-26 and MAC – R

Similar to previous research findings the EAT 26 and MAC – R scores were correlated to one another ($r = .577$, $p = 0.01$). This indicates a small to moderate correlation between the two instruments. The EAT-26 is used to assess if persons may be at risk for an eating disorder whereas the MAC –R is used most frequently to assess person's cognition changes before and after eating disorder treatment.

ANOVA Results

EAT-26 comparisons statistical summary. A one-way between subjects ANOVA was conducted to compare the effect of participant's identity stage (IV) on participant's EAT-26 (DV) for stage one, two and three (conditions). There were no significant effect of the participants identity stage on participants EAT-26 score at the $p < .05$ level for [$F(2,139) = 1.99$, $p = 0.140$]. Post hoc comparisons using the Tukey HSD test also indicated that the mean score for the EAT-26 was not significantly different for participants in stage one ($M = 8.29$, $SD = 4.03$) compared to participants in stage two ($M = 11.96$, $SD = 10.34$) and participants in stage three ($M = 8.14$, $SD = 8.29$). In conclusion, these findings suggest that identity stage does not effect EAT-26 scores.

MAC-R comparisons statistical summary. A one-way between subjects ANOVA was conducted to compare the effect of participant's identity stage (IV) on participant's and MAC-R Scores (DV) for stage one, two and three (conditions). There was a significant effect of the participants identity stage on participants MAC-R score at the $p < .05$ level for

[$F(2,139) = 3.86, p = 0.023$]. Post hoc comparisons using the Tukey HSD test indicated that the mean score on the MAC-R was significantly different for participants in stage one ($M = 78.64, SD = 15.05$) compared to participants in stage two ($M = 90.74, SD = 12.12$). Similarly, participants in stage two mean score for the MAC-R ($M = 78.64, SD = 15.05$) was significantly different than participants in stage three ($M = 83.01, SD = 14.43$). However the mean score for participants in stage one ($M = 78.64, SD = 15.05$) did not differ significantly from those in stage three ($M = 83.01, SD = 14.43$).

In conclusion, these findings suggest that a person's identity stage affects their score on the MAC-R. It appears that persons in stage two have a higher MAC-R score than those in stage one or two. Using Cohen's guidelines for effect size a small effect size requires n^2 of .01, .059 for a medium effect and .138 for a larger effect. The effect size for how much the participant's identity stage affected their MAC – R score was .053, indicating a small to medium effect (1988).

Concern for appearance comparisons statistical summary. A one-way between subjects ANOVA was conducted to compare the effect of participant's identity stage (IV) on participant's concern for appearance (DV) for stage one, two and three (conditions). There were no significant effects of the participants identity stage on participants concern for appearance score at the $p < .05$ level for [$F(2, 139) = .641, p = 0.528$]. Post hoc comparisons using the Tukey HSD test also indicated that the mean score for concern for appearance was not significantly different for participants in stage one ($M = 2.88, SD = 1.43$) compared to participants in stage two ($M = 3.29, SD = 1.02$) and participants in stage three ($M = 3.18, SD = 1.04$). There were no significant effects of the participants identity stage on

participants concern for appearance score at the $p < .05$ level for [$F(2, 139) = .641, p = 0.528$]. Post hoc comparisons using the Tukey HSD test also indicated that the mean score for concern for appearance was not significantly different for participants in stage one ($M = 2.88, SD = 1.43$) compared to participants in stage two ($M = 3.29, SD = 1.02$) and participants in stage three ($M = 3.18, SD = 1.04$). In conclusion, these findings suggested that identity stage does not effect participants mean concern for about their appearance. All ANOVA results between instruments and GIQ are illustrated in table 5 of the appendix.

Sexual orientation statistical summary. A one-way between subjects ANOVA was conducted to compare the effect of participant's sexual orientation (IV) on participant's identity stage (DV) for bisexual, gay and other (conditions). There was a significant effect of the participant's sexual orientation on participant's identity stage at the $p < .05$ level for [$F(2,139) = 28.044, p = 0.000$]. Post hoc comparisons using the Tukey HSD test indicated that identity stage was significantly different for bisexual participants ($M = 2.15, SD = .64$) compared to gay participants ($M = 2.84, SD = .394$). Similarly, gay participants identity stage ($M = 2.84, SD = .394$) was significantly different than "other" participants ($M = 1.78, SD = .972$). However, the mean score for bisexual participants ($M = 2.15, SD = .64$) did not differ significantly from "other" participants ($M = 1.78, SD = .972$)).

In conclusion, these findings suggest that a person's sexual orientation effects their identity stage level. It appears that bisexual and "other" participants have a lower identity stage level than gay participants. Using Cohen's guidelines for effect size a small effect size requires n^2 of .01, .059 for a medium effect and .138 for a larger effect. The effect size for

how much the participant's sexual orientation effected their GIQ score was .288, indicating a small to strong effect (1988). Results can be seen in table six of the appendix.

CHAPTER 5

Discussion

Summary

Research question, goal and hypotheses. The question that the current research attempted to answer was, are there differences in the eating behaviors of non-heterosexual males in different stages of gay identity formation? The goal of this research was to identify if non-heterosexual males were at a higher risk of eating disordered behaviors depending on their stage level of gay identity development. The hypotheses predicted that persons in the lower levels of identity development would exhibit more eating disordered behaviors than those in the higher stages.

Research findings. The results of the current study showed a significant relationship between participants MAC- R score and their level of identity development. There was no significant relationship between participants EAT- 26 score and identity stage level or mean appearance score. Although the MAC- R and EAT- 26 scores were correlated, the MAC- R assess eating disordered cognitions in more depth than the EAT- 26, which is used as a brief self-assessment tool, not a diagnostic instrument. Cognitive changes are integral in both treating eating disorders and attaining a positive GLBT identity which may account for the differences between participants EAT- 26 scores and MAC- R scores.

Research findings and hypotheses. The findings indicated that participants in the second stage of identity development displayed more eating disordered cognitions than those in the first or third. The hypotheses predicted that participants in lower levels would display more eating disordered cognitions. Results indicated that participants in the second stage

were more likely to display eating disordered behavior which may be due to a variety of factors. Persons in stage two, by definition, would be increasing their interaction with the GLBT community and decreasing interactions with heterosexuals. They are more likely to identify themselves as GLBT, although they may not be out and feel that this part of their identity could change. Gay culture differs from that of heterosexual men. Gay culture is more likely to value attractiveness, fashion and style, and ones' fitness level and overall appearance.

Theories of eating disorder development often point to the medias' portrayal of stick thin women as an ideal, as one of the reasons that females are plagued by eating disorders. Limited research has shown that males acquire eating disorders differently, but research has not differentiated between men of different sexual orientations. It is possible that gay males acquire eating disorders differently than heterosexual men. Men in the second stage of identity development, who are beginning to immerse themselves in gay culture, may feel pressured to conform to the cultures ideals. The results of the study suggest that as non-heterosexual males immerse themselves into gay culture, eating disordered behavior increases, however once they move into the later stage decrease their disordered eating behaviors.

Research Contributions and Interactions of Findings with Previous Research

Eating disorders. Research literature involving eating disorders is extensive however there are numerous gaps which need to be filled. The current study not only addresses males, a demographic group often left out of the eating disorder research literature,

but also includes gay males, a population which is known to be at a greater risk for developing an eating disorder.

The study addresses the gay identity stage at which eating disordered cognitions are more likely to be present. The results of this research can be useful to persons in helping professions to help prevent eating disordered behaviors from developing as well as help treat them. Although the current study didn't address the rate of eating disordered behaviors in the gay male population in comparison to females or heterosexual males, similar to other research findings, based on participants responses to the eating questionnaires many of the participants would be considered at risk for an eating disorder.

GLBT identity development. Research into how GLBT persons develop their GLBT identity has many flaws. Although many researchers have proposed development models the most often cited is Cass's model, which she herself admits to being flawed. The current study once again showed that there are fewer stages of identity development than Cass believed and showed the need for an up to date GLBT identity theory.

Limitations

All research studies have limitations that that can impact the significance of the findings and the generalizability of the results. A common limitation in GLBT identity theories is poor research design which affects the development of GLBT identity theories that are up to date. The lack of a strong theory forces researchers to either develop their own, or use ones that are flawed. One limitation of the current study stems from using an outdated, flawed theory as well as a questionnaire based on the theory to identify participants

GLBT identity stage. Other limitations of the current research include participant characteristics, sample size, instrumentation and the nature of studying sexuality.

Participant characteristics. The participants of the study could cause potential limitations.

Economic status. All of the participants needed internet access in order to receive and complete the survey. Participants would also need to be familiar with social media technology. These requirements limit the sample in regards to economic status and possibly age. A large proportion of GLBT youth are homeless, often because of their families' lack of acceptance. Only offering the survey online would not allow people of low economic status the ability to complete the study. Using NCSU's GLBT center list serve could also limit the generalizability of the results since members are more likely to be affiliated with the University than not. In order to limit the effect of this potential limitation, Facebook and Twitter were also used to potentially add variety of participants.

Age. Another variable that could limit the current study is age. Many years ago it was common to remain in the closet due to personal circumstances, which impacted the age at which persons came out. In today's society GLBT persons are coming out at earlier ages. By limiting the study to only include participants who were 18 years or older may of made it difficult to find participants in the early stages. Including minors in the study could help remedy this limitation.

Sample size. Another limitation of the current research is that it is difficult to predict how many participants would be needed to have sufficient statistical power. Three power charts were consulted to help determine the minimum number of participants needed. Using

these charts it was determined that at least 43 participants were needed for a medium effect size. Although 142 participants completed the study, almost 100 more than required, it is possible that since the study surveyed a unique population of persons, with no accurate number of how many GLBT persons exist, that the sample size was not sufficient.

Nature of studying sexuality. Studying sexuality can be a difficult endeavor due to the private nature of the topic. Studying GLBT identity development is even more difficult. GLBT identity theories claim that persons in the earliest stages are unlikely to fill out a survey about sexuality since they are still struggling with claiming that piece of their identity. A limitation to this study, similar to other studies researching GLBT identity development is that most of the participants surveyed were in the second and third stages of identity development. The small amount of participants in the first stage make comparisons between it and other stages difficult, one outlier can greatly skew the results.

The design of the demographic questionnaire attempted to alleviate this problem by including “other” as an option for sexual orientation. This would allow persons who may have feelings or attractions to members of the same biological sex, whom are uncomfortable with their sexuality to participate in the study. Since there was a significant relationship between sexual orientation and identity stage using the “other” category may have been beneficial in increasing the number of participants in stage one.

Theories of GLBT identity development. A possible limitation of this study occurred by using outdated theories and questionnaires to determine the participants’ GLBT identity development stage level. Previous research into theories of GLBT identity development have numerous limitations including poor sample size, researcher bias, poor

statistical techniques and research design. Even with all of its flaws academia has accepted Cass's theory, even though she herself noted its numerous limitations, which she never corrected. Studying GLBT identity development is difficult since there are no strong theories in the research literature and recent attempts to add to the literature seems limited to thesis and dissertation research and is rarely revisited.

Instruments. Two limitations of the study involve the population for which questionnaires were designed.

Sexuality. Cass's model, and her questionnaire were designed for gay men. Brady and Busse's questionnaire was also only used on gay males. Using their questionnaire with bisexual participants, specifically without rewording some of the questions may effect bisexual participants' identity stage. For example, a question stating "I doubt I am homosexual" if answered true by a gay male would indicate a lack of acceptance of their sexuality, whereas if answered true by a bisexual participant would lower their identity stage even if they accept their bisexuality.

Eating surveys. Similar to the previous limitation both the EAT – 26 and MAC – R were normed on female participants. More research needs to be conducted with males to determine if these surveys are valid for more than women.

Recommendations for Future Research

General recommendations. More research is needed surrounding males and eating disorder diagnosis and treatment, as well as the impact sexual orientation may have on eating disorders. Increasing the number of participants in identity stages one and two would increase the generalizability of the results. As noted previously it is difficult to find

participants in the earliest stages of GLBT identity development. A possible remedy for this problem could be to allow all persons, including those whom identify as heterosexual to complete the GIQ. This may increase the number of persons who are still coming to terms with their sexuality, without them having to “come out”.

Eating disorders. Although males are more frequently being included in eating disorder research they are diagnosed and treated using questionnaires and methods that were normed on females. Current research has shown that males and females develop eating disorders differently and do not benefit from the same types of therapeutic techniques. Future research needs to include developing diagnostic tools and treatment techniques specifically for males.

GLBT identity development. Future research needs to include developing a well formulated theory of GLBT identity development. Specifically research needs to address how each group may develop their identities differently. Although all members of the GLBT community may experience similarities in regards to developing their identity, it is possible that gay males encounter difficulties that bisexual males or lesbians do. At minimum inventories that are used to assess a GLBT persons’ identity stage need to be updated to include terminology inclusive of the entire GLBT community. Lastly, research incorporating transgender persons is extremely limited. Transgender participants were not included in the current study due to possible cognitive differences between biologically male persons and transgendered males.

Treating eating disorders in gay males. Future research is needed involving treating gay males with eating disorders. Previous research has shown that gay males are at a

higher risk for eating disorders than heterosexual males. Since cognitive treatment techniques have been the most successful in treating eating disorders using a cognitive identity theory to determine the GLBT identity stage level of the client may help treatment. A client who may be functioning at an earlier stage of identity and cognitive development could need different treatment techniques than one in a later stage.

Recommendations for Practice

Prevention. Eating disorders have become increasingly more common in the last few decades and are difficult to treat. Identifying when and how a person is more likely to begin engaging in eating disordered behaviors would be useful to help prevent them from occurring. The current studies results indicate that eating disordered behavior exists at a higher rate in the second stage of identity development for non-heterosexual males. This information would be useful to helping professionals in schools and other community agencies to help prevent the problem from beginning.

Treatment. Treating eating disorders is a difficult endeavor, even for the persons the research has studied extensively. Treating males, specifically gay males could be even more difficult as little research has been dedicated to understanding eating disorders in males. Cashwell and Marzalek's GLAD model of identity development could be useful when counseling gay men with eating disorders. Identifying the client's identity stage and using the counseling techniques associated with that stage could help the client gain a positive and affirming GLBT identity as well as help the client overcome disordered eating cognitions.

Identity stage and mental health. Although Cass believed that mental wellbeing and identity stage level were correlated there has been limited evidence of her belief. The

current study showed that persons in the second stage were more likely to have disordered eating cognitions than those in the first or third. This may be due to the limited number of participants in the first two stages but may not. Cass did not specify what types of mental health concerns she believed were correlated with GLBT identity stage however one could argue that engaging in disordered eating behaviors is not only physically unhealthy but mentally.

Since Cass's model is the most widely taught, it is important when working with any client that counselors and other health care practitioners keep an open mind and not assume that a single theory can explain how persons develop their identities. It is important when working with GLBT clients to not assume that someone in the early stages of GLBT development is less mentally healthy than someone in the later stages. Addressing each person individually and using theories and techniques as a guide is a more ethical practice and should be recommended to all helping professionals.

Closing Statement

People in the GLBT community struggle in ways that people in the majority do not. The coming out process is difficult and can result in huge losses, including friends, family and even one's home. The homeless population is made up of large proportion of GLBT youth. Life on the streets increases gay males' likelihood to abuse alcohol and drugs and often places them in situations where they have a higher risk of contracting an STD. GLBT persons are seven to ten percent more likely to kill themselves than their heterosexual peers. The statistics and risks go on and on, yet research literature often excludes this population.

Interacting with friends and students day after day who are experiencing so many of these “statistics” led to this research. As helping professionals it is imperative to place one’s opinions about “homosexuals” aside and start to help a population that has been extensively bullied attain a positive identity. The current research aimed to help non-heterosexual males do so by determining when they were most likely to engage in eating disordered behaviors and addressing how a cognitive identity stage theory could help not only treat eating disorders in this population, but to help them gain an overall positive identity.

REFERENCES

- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, D.C.
- American Psychiatric Association. (2009). Retrieved November 30, 2009 from the World Wide Web: <http://www.apa.org/releases/therapeutic.html>.
- ANAD (Anorexia Nervosa and Related Disorders). (2009). *Athletes with eating disorders: An overview: Anorexia Nervosa and Related Eating Disorders, Inc.* Retrieved June 01, 2009 from the World Wide Web: <http://www.anad.org>.
- ANAD (Anorexia and Related Disorders). (2009). *Males with eating disorders: An overview: Anorexia Nervosa and Related Eating Disorders, Inc.* Retrieved June 1, 2009 from the World Wide Web: <http://www.anad.org>.
- Anderson, E. (1992). Eating disorders in males. In R. Lemberg (Ed.), *Controlling eating disorders with facts advice and resources* (21-28). Phoenix, AZ: The Oryx Press.
- Baker, J., Williamson, D., & Sylve, C. (1995). Body image disturbance, memory bias, and body dysphoria: Effects of negative mood induction. *Behavior Therapy*, 26, 747-759.
- Beck, A. (2009). *About cognitive therapy*. Retrieved November 30, 2009 from the World Wide Web: <http://www.beckinstitute.org>.
- Berland, N.W., Thompson, J.K., & Linton, P.H. (1986). Correlation between the EAT-26 and the EAT-40, the eating disorders inventory, and the restrained eating inventory. *International Journal of Eating Disorders*, 5, 569-574.
- Bilodeau, B., & Renn, K. (2005). Analysis of LGBT identity development models and implications for practice. *New Directions for Student Services*, 111, 25-38.

- Brady, S., & Busse, W. (1994). The gay identity questionnaire: A brief measure of homosexual identity formation. *Journal of Homosexuality, 26*, 1.
- Burgess, I., Jones, L., Robertson, S., Radcliffe, W., & Emerson, E. (1981). The degree of control exerted by phobic and non-phobic verbal stimulation over the recognition behavior of phobic and non-phobic subjects. *Behaviour Research and Therapy, 19*, 233-243.
- Cass, V. (1979). Homosexual identity formation: A theoretical model. *Journal of Homosexuality, 4*, 219-235.
- Cass, V. (1984). Homosexual identity formation: Testing a theoretical model. *The Journal of Sex Research, 20*, 143-167.
- Cohen, Jacob. (1988). *Statistical Power Analysis for the Behavioral Sciences* (second ed.). Lawrence Erlbaum Associates.
- Crosscope-Happel, C. (2000). Male anorexia nervosa: A new focus. *Journal of Mental Counseling, 22*, 365-371.
- Dank, B. (1971). Coming out in the gay world. *Psychiatry, 34*, 180-197.
- Davies, J., McCrae, B., Frank, J., Dochnahl, A., Pickering, T., Harrison, B., Zakrezewski, M., Wilson, K. (2000). Identifying male college students' perceived health needs, barriers to seeking help and recommendations to help men adopt healthier lifestyles. *Journal of American College Health, 48*. 259-268.
- Eliot, A., & Baker, C. (2001) Eating disordered adolescent males. *Adolescence, 36*, 535-544.

- Epstein, E. & Sloan, D. (2005). Tailoring cognitive behavioral therapy for individuals diagnosed with bulimia nervosa. *Journal of Contemporary Psychotherapy* 35, 317-330.
- Fairburn, C., Cooper, P., Cooper, M., McKenna, F., & Anastasiades, P. (1991). Selective information processing in bulimia nervosa. *International Journal of Eating Disorders*, 10, 415-422.
- Fernandez-Aranda, F., Krug, I., Jimenez-Murcia, S., Granero, R., Nunez, A., Penelo, E., Solano, R., & Treasure, J. (2009). Male eating disorders and therapy: A controlled pilot study with one-year follow-up. *Journal of Behavior Therapy and Experimental Psychiatry*, 40, 479-486.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.
- Forbes, G., Adams-Curtis, L., Rade, B., Jaberg, P., (2001) Body dissatisfaction in women and men: The role of gender-typing and self-esteem. *Sex Roles*, 44, 461-483.
- Fuller, R., Williamson, D., & Anderson, T. (1995). Selective information processing of body size and food related stimuli in women who are preoccupied with body size. *Advances in Health Care Research*, 14, 61-66.
- Garner, D.M., & Bemis, K.M. (1982). A cognitive-behavioral approach to anorexia nervosa. *Cognitive Therapy and Research*, 6, 123-150.
- Garner, D.M., & Garfinkel, P.E. (1979). The eating attitudes test; an index of the symptoms of anorexia nervosa. *Psychological Medicine*, 9, 273-279.

- Garner, D.M., Olmstead, M.P., Bohr, Y., & Garfinkel, P.E. (1982). The eating attitude test: psychometric features and clinical correlates. *Psychological Medicine, 12*, 871-8.
- Hadigan, C., Walsh, T., Devlin, M., & LaChaussee, J. (1992). Behavioral assessment of satiety in bulimia nervosa. *Appetite, 18*, 233-241.
- Hill, A., & Kemp-Wheeler, S. (1989). The influence of context on lexical decision times for emotionally aversive words. *Current Psychology, 8*, 218-227.
- Heppner, P. P., Kivlighan, D. M., Wampold, B. E. (2007). *Research design in counseling*. Brooks Cole.
- Ivey, A. (1990). *Developmental therapy*. San Francisco, CA: Jossey-Bass.
- Ivey, A. (1993). *Developmental strategies for helpers: Client, family, and network interventions*. North Amherst, MA: Micro-training Associates.
- Ivey, A. & Rigazio-DiGilio, S. (1993). The standard cognitive-developmental classification system. In A. E. Ivey (Ed.), *Developmental strategies for helpers: Individual, family, and network interventions* (pp. 301-306). North Amherst, MA: Micro-training Associates.
- Jackman, L., Williamson, D., Netemeyer, R. & Anderson, D. (1995). Do weight preoccupied women misinterpret ambiguous stimuli related to body size? *Cognitive Therapy and Research, 19*, 341-355.
- Kelly, K. (2003). Adolescent homosexuality: We need to learn more about causes and consequences. *Acta Paediatr, 92*, 141-144.
- Lee, M., & Shafran, R. (2004). Information processing biases in eating disorders. *Clinical Psychology Review, 24*, 215-238.

- Males and Eating Disorders. (2009). Males and eating disorders: Some basic facts and findings. *Eating Disorder Referral and Information Center*. Retrieved September 10th 2009 from the World Wide Web:
http://www.edreferral.com/males_eating_disorders.htm.
- Marszalek, J., & Cashwell, C. (1999). The gay and lesbian affirmative development (GLAD) model: Facilitating positive gay identity development. *Adultspan Journal, 1*, 13-29.
- Marszalek, J., Cashwell, C., Dunn, M., & Jones, K. (2004). Comparing gay identity development theory to cognitive development: An empirical study. *Journal of Homosexuality, 48*, 103-123.
- Mathews, A., Richards, A., & Eysenck, M. (1989). Interpretation of homophones related to threat in anxiety states. *Journal of Abnormal Psychology, 98*, 31-34.
- MacLeod, C., Mathews, A., & Tata, P. (1986). Attentional bias in emotional disorders. *Journal of Abnormal Psychology, 95*, 15–20.
- Mizes, J.S. (1988) Personality characteristics of bulimic and non-eating disordered female controls: a cognitive behavioral perspective. *International Journal of Eating Disorders, 7*, 541-550
- Mizes, J.S., Christiano, B., Madison, J., Post, G., Seime, R., Varnado, P. (2000). Development of the Mizes anorectic cognitions questionnaire-revised: psychometric properties and factor structure in a large sample of eating disorder patients. *International Journal of Eating Disorders, 28*, 415-421.

- Mogg, K., Bradley, B., Hyare, H., & Lee, S. (1998). Selective attention to food-related stimuli in hunger: Are attentional biases specific to emotional and psychopathological states, or are they also found in normal drive states? *Behaviour Research and Therapy*, *36*, 227-237.
- NEDA (National Eating Disorder Association). (2009). *Information and Resources*: Retrieved January 10, 2009 from the World Wide Web:
<http://www.nationaleatingdisorders.org/information-resources>.
- NEDIC (2010). Retrieved January 01, 2010 from the World Wide Web:
<http://www.nedic.ca/knowthefacts/definitions.shtml>.
- Nelson, W., & Hughes, H. (1999). Anorexic eating attitudes and behaviors of male and female college students. *Adolescence*, *34*, 621-634.
- Nye, S. & Cash, T. (2006). Outcomes of manualized cognitive-behavioral body image therapy with eating disordered women treated in a private clinical practice. *Eating Disorders*, *14*, 31-40.
- O'dea, J. & Anderson, S. (2002) Eating and exercise disorder in young college men. *Journal of American College Health*, *50*, 273-278.
- Perrin, L. (1995). *Interpretation of ambiguous body-related stimuli in the eating disorders*. Unpublished doctoral dissertation, Louisiana State University, Baton Rouge.
- Papini, D., & Farmer, F. (1990). Self-disclosure in adolescence. *Adolescence*, *25*, 959-978.
- Peterson, C., & Mitchell, J. (1999). Psychosocial and pharmacological treatment of eating disorders: A review of research findings. *Journal of Clinical Psychology*, *55*(6) 685-697.

- Prather, R. C., & Williamson, D. A. (1988). Psychopathology associated with bulimia, binge eating, and obesity. *Journal of International Eating Disorders, 7*, 177-184.
- Queer Theory. (2009). *Changing our minds: The story of Dr. Evelyn Hooker*. Retrieved November 30, 2009 from the World Wide Web:
<http://www.queertheory.com/histories>.
- Rader Programs. (2008). *Specializing in the treatment of all eating disorders including anorexia, bulimia, and compulsive overeating*. Retrieved March 13th, 2008 from the World Wide Web: <http://www.raderprograms.com>.
- Renfrew Center. (2008). *Eating disorders, a summary of issues, statistics and resources*. Renfrew Center Foundation for Eating Disorders. Retrieved March 13th, 2008 from the World Wide Web. <http://www.renfrew.org>.
- Rigazio-DiGilio, S., & Ivey, A. (1990). Developmental therapy and depressive disorders: Measuring cognitive levels through patient natural language. *Professional Psychology: Research and Practice, 21*(6), 470-475.
- Rosenberg, M. (1979). *Conceiving the self*. New York: Basic Books.
- Schotte, D., McNally, R., & Turner, M. (1990). A dichotic listening analysis of body weight concern in bulimia nervosa. *International Journal of Eating Disorders, 9*, 109-113.
- Sebastian, S., Williamson, D., & Blouin, D. (1996). Memory bias for fatness stimuli in the eating disorders. *Cognitive Therapy and Research, 20*, 275-286. *Gender and Society, 23* (4), 440 – 464.

- Schilt, K., & Westbrook, L. (2009). Doing gender, doing heteronormativity. Gender normals, transgender people, and the social maintenance of heterosexuality. *Gender & Society, 23* (4), 440-460.
- Shafran, R., Lee, M., Cooper, Z., Palmer, R., & Fairburn, C. (2007). Attentional bias in eating disorders. *International Journal of Eating Disorders, 40*, 369 - 380.
- Shafran, R., Lee, M., Cooper, Z., Palmer, R., & Fairburn, C. (2008). Effect of psychological treatment on attentional bias in eating disorders. *International Journal of Eating Disorders, 41*(4), 348-354.
- Shively, M.G., Jones, C., & De Cecco J.P. (1984). Research on sexual orientation: definitions and methods. *Journal of Homosexuality, 9*, 127-36.
- South Coast Medical Center, (2009) *Eating disorder questionnaire*. South Coast Medical Center. Retrieved May 09, 2009 from the World Wide Web:
www.southcoastmedcenter.com/content/services/behavioral/quizzes/eating_disorders.asp.
- Stevens, R. (2004). Understanding gay identity development within the college environment. *Journal of College Student Development, 45* (2), 185-206.
- Survey Systems. (2010). *Sample size calculator*. Retrieved June 01, 2010 from the World Wide Web: <http://www.surveysystem.com/sscalc.htm#one>
- Troiden, R. (1979). Becoming homosexual: A model of gay identity acquisition. *Psychiatry, 42*, 362-373.
- Troiden, R. (1989). The formation of homosexual identities. *Journal of Homosexuality, 17*, 43-73.

- Vito, M, (2010). *Male eating disorders: Re-evaluating the Stereotypes*. Retrieved January 01, 2010 from the World Wide Web: <http://www.eating-disorder.com/Eating-Treatment/Eating-Disorders/male-anorexia-eating-disorder.htm>.
- Vitousek, K. & Hollon, S. (1990). The investigation of schematic content and processing in eating disorders. *Cognitive Therapy and Research*, 14, 191–214.
- Waller, G., Watkins, H., Shuck, V., & McManus, F. (1996). Bulimic psychopathology and attentional biases to ego threats among non-eating-disordered women. *International Journal of Eating Disorders*, 20, 169–176.
- Watkins, P. C., Martin, C., Muller, S., & Day, S. K. (1995). Cognitive biases associated with the feeling of fatness: Unhealthy responses to healthy messages. *Advances in Health Care Research*, 14, 67-73.
- Watts, F., McKenna, F., Sharrock, R., & Trezise, L. (1986). Colour naming of phobia related words. *British Journal of Psychology*, 77, 97-108.
- Warren, C. (1974). *Identity and community in the gay world*. New York: John Wiley & Sons.
- Weisensee, K. (2009). *Male eating disorders may be more common than we think*. Retrieved May 01, 2009 from the World Wide Web: <http://news.medill.northwestern.edu/chicago/news.aspx?id=114097>.
- Williamson, D.A., Anderson, D.A., Jackman, L.P., & Jackson, S.R. (1995). *Assessment of eating disordered thoughts, feelings, and behaviors*. In D.B., (Allison (Ed.) Handbook of assessment methods for eating behaviors and weight related problems (pp 347-386). Thousand Oaks, CA: Sage.

- Williams, D.A., Cubic, B.A., & Gleaves, D.H. (1993). Equivalence of body image disturbances in anorexia and bulimia nervosa. *Journal of Abnormal Psychology, 102*, 177-180.
- Williamson, I. & Hartley, P. (1998). British research into the increased vulnerability of young gay men to eating disturbance and body dissatisfaction. *European Eating Disorders Review, 6*, 160-170.
- Williamson, D., Muller, S., Reas, D., & Thaw, J. (1999). Cognitive bias in eating disorders: Implications for theory and treatment. *Behavior Modification, 23*, 556.
- Williamson, D., White, M., York-Crowe, E., & Stewart, T. (2004). Cognitive-behavioral theories of eating disorders. *Behavior Modification, 28*, 711-738.
- Wolper, C., Heshka, S., & Heymsfield, S. (1995). *Measuring food intake: An overview*. in D.B. Allison (Ed.), *Handbook of assessment methods for eating behaviors and weight-related problems: Measures, theory, and research* (pp. 215-240). Thousand Oaks, CA: Sage.
- Yoon, E., & Funk, R. (2008). *The psychometric properties of eating attitude test – 26*. Society for Social Work and Research. Retrieved from the World Wide Web: <http://sswr.confex.com/sswr/2008/techprogram/P8319.HTM>

APPENDICES

Appendix A Tables

Table 1		
Sexual Orientation of Participants		
Sexual Orientation	Frequency	Percent
Gay	27	19
Bisexual	106	75
Other	9	6
Total	142	100

Table 2						
Eating Attitudes Test 26 (EAT-26) Score Frequency, Mean and Standard						
Deviation by Sexual Orientation						
	EAT 26	Bisexual	Gay	Other	Frequency	Percent
	0-5	9	48	3	60	42
	6-11	11	32	3	46	32
	12-17	5	10	1	16	11
	18-23	2	4	0	6	4
	24-29	0	6	1	7	5
	30-35	0	6	1	7	5
	<i>N</i>	27	106	9	142	100
<i>X</i>						
<i>SD</i>		5.23	8.77	11.45	8.41	

Note. *X* = mean, *SD* = standard deviation, *N* = number of participants, EAT 26 = Eating Attitudes Test 26 score categories

Table 3						
Mizes Anorectic Cognitions Revised (MAC-R) Score Frequency, Mean and Standard Deviation by Sexual Orientation						
	MAC –R	Bisexual	Gay	Other	Frequency	Percent
	45-54	1	1	1	3	2
	55-64	4	7	0	11	8
	65-74	7	19	0	26	18
	75-84	6	23	3	32	23
	85-94	5	28	2	35	25
	95-104	4	21	2	27	19
	105-114	0	5	1	6	4
	115-124	0	2	0	2	1
<i>N</i>		27	106	9	142	100
<i>X</i>		77.81	85.03	87.78	83.83	
<i>SD</i>		12.619	14.330	17.319	14.433	

Note. *X* = mean, *SD* = standard deviation, *N* = number of participants, MAC-R = Mizes Anorectic Cognitions Revised score categories

Table 4					
Participants' Mean and Standard Deviation by Sexual Orientation on Measures					
Sexual Orientation		Identity Stage	Mizes Score	Eat 6 Score	Appearance Concern
Bisexual	<i>X</i>	1.96	77.81	8.19	2.77
	<i>N</i>	27	27	27	27
	<i>SD</i>	.94	12.62	5.23	1.21
Gay	<i>X</i>	2.74	85.03	8.63	3.25
	<i>N</i>	106	106	106	106
	<i>SD</i>	.52	14.33	8.77	.99
Other	<i>X</i>	1.56	87.78	12.22	3.33
	<i>N</i>	9	9	9	9
	<i>SD</i>	.73	17.32	11.45	1.47
Total	<i>X</i>	2.51	83.83	8.77	3.17
	<i>N</i>	142	142	142	142
	<i>SD</i>	.74	14.43	8.41	1.01

Note. *X* = mean, *SD* = standard deviation, *N* = number of participants

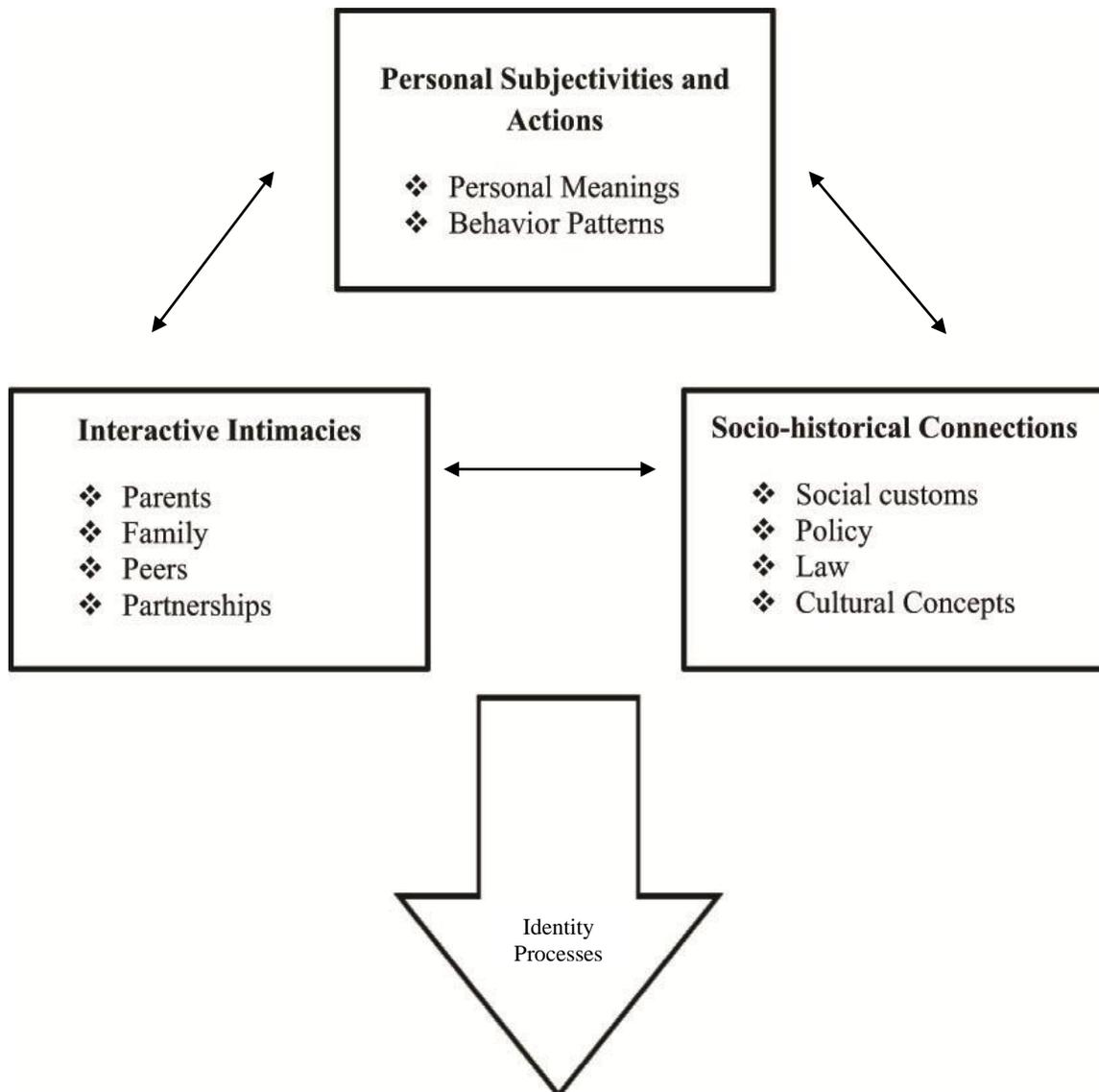
Table 5						
ANOVA Results for all Measures						
	Sum of Squares	df	Mean Square	F	Sig	Eta Squared
MAC-R Score						
Between Groups	1545.304	2	777.652	3.86	.023	.053
Within Groups	27826.640	139	200.192	0		
Total	29371.944	141				
Eat 26 Score						
Between Groups	278.118	2	139.059	1.99	.140	
Within Groups	9704.671	139	69.818	2		
Total	9982.789	141				
Mean Concern						
Between Groups	1.499	2	.749	.641	.528	
Within Groups	162.524	139	1.169			
Total	164.023	141				

Note. MAC-R = Mizes Anorectic Cognitions Revised, EAT 26 = Eating Attitudes

Test 26, Mean Concern = Participants' overall concern about their appearance

Table 6						
ANOVA Results Identity Stage and Sexual Orientation						
	Sum of Squares	df	Mean Square	F	Sig.	Eta Squared
Sexual Orientation						
Between Groups	17.447	2	8.723	28.04	.000	.288
Within Groups	43.237	139	.311			
Total	60.683	141				

Note. ANOVA results to determine if there was a relationship between participants' sexual orientation and their identity stage.

Appendix B**Figures****Figure 1. D'Augelli's Developmental Model (Rivers, 1997)**

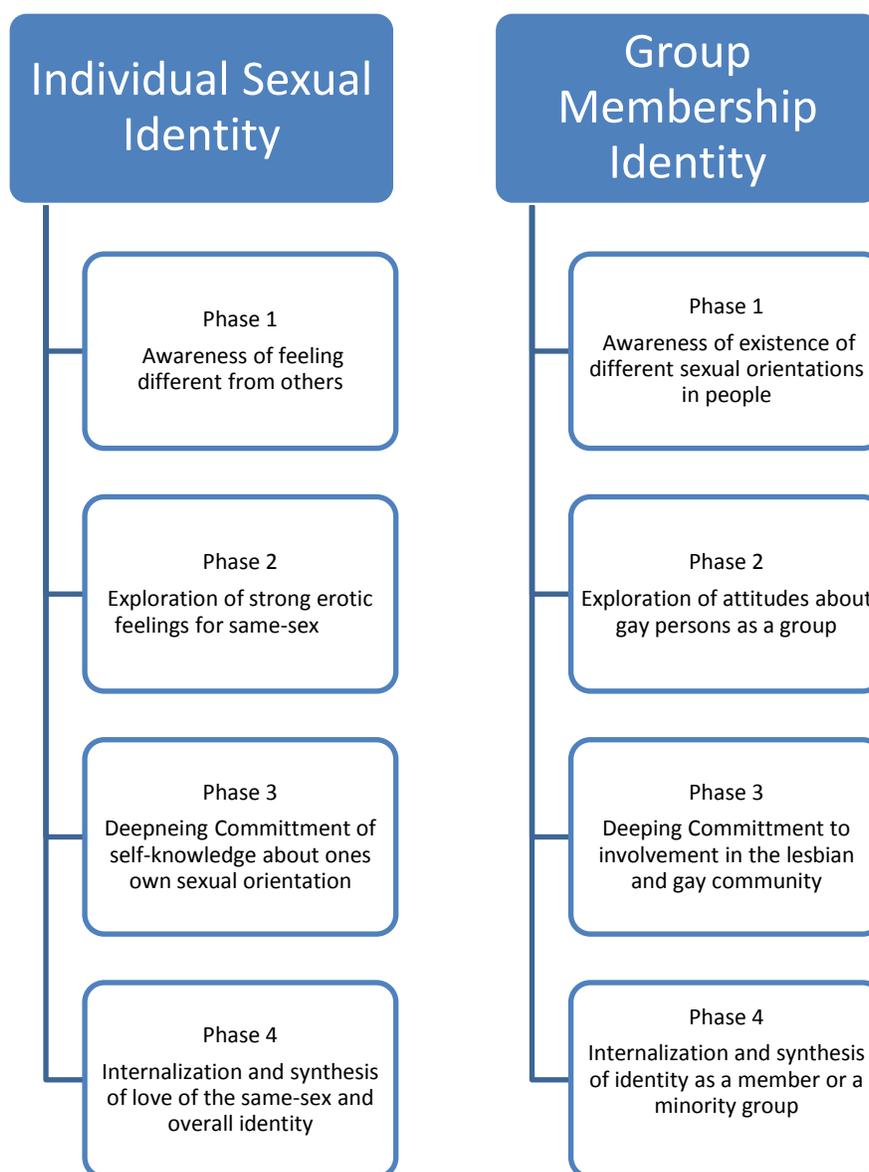


Figure 2. Fassinger's Individual and Group Identity Development Model

Vivienne Cass: Homosexual Identity Formation Model	Allen Ivey: Developmental Counseling Therapy	Useful Counseling Approaches for GLBT Clients
Pre-Identity Confusion Identity Confusion	Sensorimotor	Gestalt Therapy Relaxation Techniques Behavioral Therapy
Identity Comparison Identity Tolerance	Concrete Operations	Reality Therapy Rational Emotive Therapy Behavioral Techniques
Identity Acceptance	Formal Operations	Person Centered Therapy Reframing Techniques Psychodynamic Therapies Existential Therapy
Identity Synthesis	Dialectic/Deconstruction	Feminist Therapy Family Therapy Dialectic Awareness Techniques

Figure 3. Counseling Approaches Matched With Gay or Lesbian Identity and Cognitive Developmental Levels Marszalek and Cashwell (1999)

Stage 1	Pre-identity Confusion/Early Sensorimotor
Stage 2	Identity Confusion/Late sensorimotor
Stage 3	Identity Comparison/Concrete Operational
Stage 4	Identity Tolerance/Late Concrete Operational
Stage 5	Identity Acceptance/Early Formal
Stage 6	Identity Pride/Late Formal Operational
Stage 7	Identity Synthesis/Early Dialectic
Stage 8	Late Dialectic/Systemic and Deconstruction

Figure 4. Marszalek and Cashwell ‘s GLAD Model (1999)

Appendix C
Thesis Equivalency Survey
Eating Habits Survey

Section 1. Background information: This section includes background information for the use of sorting participant responses.

1. What is your age? (Check one)
 - 0-17
 - 18 and over

2. What is your biological sex? (Check one)
 - Male
 - Female
 - Other (Please Explain) _____

3. What is your gender identity? (Check one)
 - Male
 - Female
 - Other (Please Explain)_____

4. What is your sexual orientation? (Check one)
 - Heterosexual
 - Gay/Lesbian
 - Bisexual
 - Other (Please explain) _____

Section 2 Eating habits (Check the statements that apply to you.)

- I often feel fat, even though people keep telling me I am thin.
- The first thing I think about when I wake up in the morning is food.
- I feel uneasy about food and eating, but I keep my feelings to myself because no one would understand.
- I have dieted to an abnormally low weight because that makes me feel like I am in control.
- I have not had a menstrual period for at least the past three months.
- I often eat when I am not hungry.
- My greatest fear is that I will gain weight and become fat.
- I cannot go through a day without worrying about what I can or cannot eat.
- I have had an out-of-control eating binge at least once during the past year.
- I often eat until I'm so full, I'm uncomfortable.
- I have done one of the following after a binge at least once during the past year; made myself vomit, used laxatives, enemas, colonics or diuretics, fasted, exercised excessively.
- If I got on the scale tomorrow and found that I had gained two pounds, I'd be very upset.
- If I cannot exercise to compensate for food I've eaten, I panic.
- I push food around my plate so that it looks like I'm eating more than I really am.
- Often I eat to make myself feel better emotionally, but then I feel guilty about it.
- I prefer to eat little in public, then I binge secretly in private.
- I think and talk a lot about food, recipes, weight, diets, restaurants and other topics related to food.
- People always seem to be bothering me about what I am eating or not eating, which makes me angry.
- I do not believe I will find happiness until I am thin.
- It's important to me to be thinner than my friends are.

Appendix D

North Carolina State University

Informed Consent form for Research

Title of Study: Eating habits and identity of males who engage in same-sex sexual behaviors

Principal Investigator: Rebekah Jaeger

Faculty Sponsor: Dr. Stanley Baker

Survey Consent Form

What are some general things you should know about research studies?

You are being asked to take part in a research study, in which your participation is voluntary. In order to participate in this study you must be at least 18 years of age and be a male who engages in same-sex sexual behaviors. You have the right to be a part of this study, to choose not to participate or to stop participating at any time without penalty. The purpose of research studies is to gain a better understanding of a certain topic or issue. You are not guaranteed any personal benefits from being in a study.

Research studies also may pose risks to those that participate. In this consent form you will find specific details about the research in which you are being asked to participate. If you do not understand something in this form it is your right to ask the researcher for clarification or more information. A copy of this consent form will be provided to you before filling out the survey online. If at any time you have questions about your participation, do not hesitate to contact the researcher(s) named above.

What is the purpose of this study?

The purpose of this study is to gain knowledge about sexual orientation, and eating habits. The study is completely anonymous and no identifying information will be collected.

What will happen if you take part in the study?

If you agree to participate in this study, you will be asked to respond to a survey which will ask information about your eating habits and sexual behaviors. Some of the questions in the survey may be associated with disordered eating behaviors. After reading this consent form, if you wish to participate in the study, please follow the link below to the Survey Gizmo website. While filling out the survey it is important to identify your sexual orientation as well as your gender identity and your age. If you do not wish to disclose this or any other information than you have the right to skip any question you do not want to answer, or stop the survey at any time.

Submission of the study is completely anonymous and no identifying information will be used to record participant's responses. The online survey site will not collect your email, IP, and/or Mac address. Only the researcher will have access to the surveys after they are filled out. All data will be securely stored on a password locked personal computer and online through a password protected account. Any publication of the data found in the study will not contain identifying information. If you fill out the survey you are agreeing to participate in the study. The survey will take approximately 20 to 30 minutes to fill out.

Risks

There are minimal risks in completion of the survey. If you become concerned about your own, or another person's eating behaviors you can contact the counseling center on campus. The counseling center can be reached at (919) 515-2423 during business hours. If needed campus police can be contacted at (919) 515-3000 after business hours. The researcher can also be reached at (919) 337-5946 should questions or concerns arise by participants who do not have access to NCSU's counseling center. The researcher is a licensed school counselor in North Carolina and a Nationally Certified Counselor. Since the survey is asking sensitive questions please complete the survey in a private area. It is recommended that you close down the browser if you need to leave your computer before submitting your responses.

Benefits

Although there may not be direct benefits to you for participating in this study, the knowledge you provide about eating habits for males who engage in same-sex sexual behaviors will help to further research about eating habits.

Confidentiality

The information in the study records will be kept confidential. Data will be stored securely in a password protected computer. No reference will be made in oral or written reports which could link you to the study. You will NOT be asked to write your name on any study materials so that no one can match your identity to the answers that you provide. You will be asked to provide your email address through another link after you send your responses in from the survey. Your email address will not be linked to your survey responses

and will only be used for purposes of the raffle. Once the raffle winners are drawn and contacted all email addresses will be destroyed.

Compensation

You will have the option of submitting your email address after completing the survey to be entered into a raffle to receive one of two \$50.00 gift cards. Email address submissions will not be linked with participant's survey results.

What if you are a NCSU student?-

Participation in this study is not a course requirement and your participation or lack thereof, will not affect your class standing or grades at NC State.

What if you are a NCSU employee?-

Participation in this study is not a requirement of your employment at NCSU, and your participation or lack thereof, will not affect your job.

What if you have questions about this study?

If you have questions at any time about the study or the procedures, you may contact the researcher, Rebekah Jaeger at bekahjaeger@gmail.com or (919) 337-5946

What if you have questions about your rights as a research participant?

If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Deb Paxton, Regulatory Compliance Administrator, Box 7514, NCSU Campus (919/515-4514).

Consent To Participate

“I have read and understand the above information. I agree to participate in this study with the understanding that I may choose not to participate or to stop participating at any time without penalty or loss of benefits to which I am otherwise entitled.” You can print a copy of this form for your records. Your completion and submission of the survey to the researchers represents your consent to serve as a subject in this research and verifies that you are of at least 18 years of age. Although the expected risks of participating in this survey should be minimal, the survey questions may have the potential to prompt negative emotions. If any negative emotions, such as anxiety or stress results from participation and you are an NCSU student, staff or faculty member please contact the NCSU counseling center at 515-2423. If it is after hours please contact Public Safety at 515-3333 and ask to speak with the counselor on call. Participants can also contact the researcher for any concerns at bekahjaeger@gmail.com.

Appendix F

MAC Questionnaire

Eating Survey # 2 Dissertation

This is an inventory of beliefs and attitudes about eating and weight. For each statement you should mark one of the numbers, according to your own reaction to the item:

Mark #1 if you STRONGLY DISAGREE

Mark #2 if you MODERATELY DISAGREE

Mark #3 if you NEITHER AGREE NOR DISAGREE

Mark #4 if you MODERATELY AGREE

Mark #5 if you STRONGLY AGREE

It is not necessary to think over any item very long. Mark your answer quickly and go on to the next statement. Be sure to mark how you actually feel about the statement, *not* how you think you *should* feel. Try to avoid the neutral or "3" response as much as possible. Select this answer only if you really cannot decide whether you tend to agree or disagree with a statement. Please answer all questions as honestly as you can.

Eating Survey # 2 Dissertation Continued

	1	2	3	4	5
If I don't have a specific routine for my daily eating I'll lose all control and gain weight.					
If others comment on my weight gain, I won't be able to stand it.					
I feel superior to fat people when they are eating and I am not.					
I feel victorious over my hunger when I am able to refuse sweets.					
When I feel very hungry I can't give into that hungry. If I do I'll never stop eating and I'll soon be fat.					
If my weight goes up a couple pounds, I don't worry about it. It's probably just temporary (due to water retention, for example), and eventually my weight will return to normal.					
No matter how much I weigh, fats, sweets, breads, and cereals are bad food because they always turn into fat.					
When I eat desserts, I get fat. Therefore, I must never eat desserts so I won't be fat.					
When people whisper and laugh so that I cannot hear what they are saying, they are probably saying that I look unattractive. Their laughing and whispering indicates that I have gained weight.					

Eating Survey #2 Dissertation Continued

	1	2	3	4	5
I am proud of myself when I control my urge to eat.					
No one likes fat people therefore, I must remain thin to be like by others.					
When I am overweight, I am not happy with my appearance. Gaining weight will take away the happiness I have with myself.					
If I've gained 2 pounds I can't wear shorts anymore.					
If I don't establish a daily routine, everything will be chaotic and I won't accomplish anything.					
How much I weigh has little effect on how happy I am generally.					
If I eat a sweet, it will be converted instantly into stomach fat.					
I can't enjoy anything because it will be taken away.					
It's entirely normal and OK for my weight to go up and down a few pounds.					
If I can just control my eating, I can control my life.					
If I can cut out all carbohydrates, I will never be fat.					

Eating Survey #2 Dissertation Continued

	1	2	3	4	5
I feel guilty when I have eaten foods that I shouldn't and exercising makes the guilt go away.					
My ability to deny myself food demonstrates that I am better than other people.					
When I eat something fattening, it doesn't bother me that I have temporarily let myself eat something I'm not supposed to.					
I am embarrassed when other people see me eat.					
Just because I can diet and control my hunger, it doesn't make me a better person than those who can't.					
Gaining 5 pounds would push me over the brink.					
How much I weigh has little to do with how popular I am.					
My friends will like me regardless of how much I weigh.					
When I am hungry, I know that I will eventually stop eating because I'll eventually get full and feel satisfied.					

Eating Survey #2 Dissertation Continued

	1	2	3	4	5
If I'm not in complete control, I lose all control.					
People like you because of your personality, not whether you are overweight or not.					
When I see someone who is overweight, I worry that I will be like him/her.					
If I gain one pound, I'll go on and gain a hundred pounds, so I must keep precise control of my weight, food and exercise.					

Appendix G

Brady and Busse Gay Identity Questionnaire

Identity Questionnaire Dissertation

Mark True or False to each question.	True	False
I probably am sexually attracted equally to men and women.		
I live a homosexual lifestyle at home, while at work/school I do not want others to know about my lifestyle		
My homosexuality is a valid private identity, that I do not want made public.		
I have feelings I would label as homosexual.		
I have little desire to be around most heterosexuals.		
I doubt that I am homosexual, but still am confused about who I am sexually		
I do not want most heterosexuals know that I am definitely homosexual		
I am very proud to be gay and make it known to everyone around me		
I don't have much contact with heterosexuals and can't say I miss it		
I generally feel comfortable being the only gay person in a group of heterosexuals		

Identity Questionnaire Dissertation Continued

	True	False
I'm probably homosexual even though I maintain a heterosexual image in both my personal and public life		
I have disclosed to 1 or 2 people (very few) that I have homosexual feelings although I'm not sure I'm homosexual		
I am not as angry about society's treatment of gays because even though I've told everyone about my gayness, they have responded well		
I am definitely homosexual but I do not share that knowledge with most people		
I don't mind if homosexuals know that I have homosexual thoughts and feelings, but I don't want others to know		
More than likely I'm homosexual, although I'm not positive about it yet		
I don't act like most homosexuals do, so I doubt that I'm homosexual		
I'm probably homosexual but I'm not sure yet		
I am openly gay and fully integrated into heterosexual society		
I don't think that I'm homosexual		
I don't feel I'm heterosexual or homosexual		

Identity Questionnaire Dissertation Continued

I have thoughts I would label as homosexual		
I don't want people to know what I may be homosexual, although I'm not sure if I am homosexual or not		
I may be homosexual and I am upset at the thought of it		
The topic of homosexuality does not relate to me personally		
I frequently confront people about their irrational, homophobic (fear of homosexuality) feelings		
Getting in touch with homosexuals is something I feel I need to do, even though I'm not sure I want to		
I have homosexual thoughts and feelings but I doubt that I'm homosexual		
I dread having to deal with the fact that I may be homosexual		
I am proud and open with everyone about being gay, but it isn't the major focus of my life		
I probably am heterosexual or non-sexual.		
I am experimenting with my same sex, because I don't know what my sexual preference is		
I feel accepted by homosexual friends and acquaintances, even though I'm not sure I'm homosexual		
I frequently express to others, anger over heterosexuals' oppression of me and other gays.		

Identity Questionnaire Dissertation Continued

I have not told most of the people at work that I am definitely homosexual.		
I accept but would not say that I am proud of the fact that I am definitely homosexual.		
I cannot imagine sharing my homosexual feelings with anyone		
Most heterosexuals are not credible sources of help for me		
I am openly gay around gays and heterosexuals		
I engage in sexual behavior I would label as homosexual		
I am not about to stay hidden as gay for anyone		
I tolerate rather than accept my homosexual thoughts and feelings		
My heterosexual friends, family and associates think of me as a person who happens to be gay, rather than as a gay person		
Even though I am definitely homosexual, I have not told my family		

Appendix H

Demographic and Appearance Concern Questionnaire for Dissertation

Section 1. Background Information: Please mark your answer in the box. Choose only one response.

1. What is your age?

- under 18
- 18-24
- 25-34
- 35-54
- 55+

2. What is your biological sex?

- Male
- Female

3. Race

- Asian/Pacific Islander
- Black/African-American
- Caucasian
- Hispanic
- Native American/Alaska Native
- Other/Multi-Racial

Demographic and Appearance Concern Questionnaire for Dissertation Continued

4. What is your highest level of education?

- 12th grade or less
- Graduated high school or equivalent
- Some college, no degree
- Associate degree
- Bachelor's degree
- Post-graduate degree

5. What is your annual household income?

- Less than \$25,000
- \$25,000 to \$34,999
- \$35,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 to \$124,999
- \$125,000 to \$149,999
- \$150,000 or more

6. What is your sexual orientation

- Gay
- Bisexual
- Other

7. Are you currently in a relationship?

- Yes
- No

Demographic and Appearance Concern Questionnaire for Dissertation Continued

8. If you are currently in a relationship, how long have you been?

- Less than 1 month
- 1 - 3 months
- 3 - 6 months
- 6 - 12 months
- 1 - 2 years
- 2 - 5 years
- 5 years and more
- Not Applicable

9. If yes, what is the biological sex of your partner?

- Male
- Female
- Other
- Not Applicable

10. Where do you usually meet people you have dated?

- School
- Work
- Bar/Club
- Internet
- Through friends
- Other

