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Seeking professional help for an eating disorder: The role of stigma, anticipated outcomes, and attitudes

by

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A thesis submitted to the graduate faculty

in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

Major: Psychology

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Ames, Iowa

2007

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Abstract

The perceived stigma, anticipated outcomes, and attitudes towards counseling may deter those with an eating disorder from seeking the help they need. Part 1 (N = 145) of a two-part study was conducted to examine the relationship between self-stigma and the anticipated outcomes (risks and benefits) associated with seeking counseling on attitudes toward counseling among those currently experiencing or at risk for an eating disorder. The results of multiple hierarchical regression analyses demonstrated that self-stigma, anticipated risks, and anticipated benefits significantly predicted attitudes towards seeking help for people with disordered eating. In addition, self-stigma had a stronger relationship with men's attitudes towards seeking help than women's and anticipated benefits had a stronger relationship with women's attitudes than men's. Part 2 (N = 676) used a pretest posttest experimental design to measure the effects of an educational intervention hypothesized to improve attitudes, increase the anticipated benefits and lessen the self-stigma, public stigma, and the anticipated risks associated with seeking counseling for an eating disorder. Against predictions, repeated measures Analysis of Co-Variance (ANCOVA) demonstrated that the intervention had no significant effects on attitudes, self-stigma, anticipated risks, or anticipated benefits.

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Introduction

An alarmingly high percentage of college students suffer from an eating disorder such as anorexia or bulimia (5-15%; American Anorexia Bulimia Association, [AABA], 1999; Kurth, Krahn, Nairn, & Drewnowski, 1995; Prouty, Protinsky, & Canady, 2002; Stein, 1991). The lifetime prevalence rate of any eating disorder is as high as 17.9% among female adolescents and 6.5% for male adolescents (Kjelsas, Bjornstrom, & Gotestam, 2003). Despite the high prevalence of disordered eating attitudes and behaviors on college campuses (Fairburn & Beglin, 1990), only a small percentage of people actually seek professional help for eating-related issues (Becker, Franko, Nussbaum, & Herzog, 2004; Cachelin & Striegel-Moore, 2006; Cachelin, Rebeck, Veisel, & Striegel-Moore, 2001; Striegel-Moore, Leslie, Petrill, Garvin, & Rosenheck, 2000). For example, researchers found that only 21.5% of females with anorexia and 22% of females with bulimia received medical treatment (Striegel-Moore et al., 2000). In another study, only 17% of the 58% of participants identified as at-risk for an eating disorder reported having sought help in the past for the problem (Becker et al.). In community samples of individuals meeting the criteria for an eating disorder, only 44.9% had sought treatment in the past (Cachelin & Striegel-Moore). Not seeking treatment can be a serious concern as eating disorders have been found to have a severe and chronic course of illness including a number of psychological (e.g., depression, anxiety, alcohol and substance abuse) and medical (e.g., reproductive problems, osteoporosis, cardiovascular problems) co-morbidities (Pike & Striegel-Moore, 1997; Fairburn & Brownell, 2002). Most disturbing is the high rate of mortality among people suffering from anorexia nervosa. Studies have found that anorexia nervosa has a mortality rate

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ranging from 3.4% to 5.1% (Crow, Praus, & Thuras, 1999; Herzog et al., 2000; Lee, Chan, & Hsu, 2003). As such, researchers have noted the need to explore the barriers to seeking help as well as ways to challenge these barriers among those experiencing disordered eating attitudes and behaviors (Meyer, 2001, 2005).

Despite this acknowledged need, little is known about the determinants of help-seeking behavior among those with an eating disorder. However, we do know that people, in general, tend to avoid counseling because of several psychological factors including the fear of public stigma (Ben-Porath, 2002; Deane & Todd, 1996), self-stigma (Amato & Bradshaw, 1985; Ben-Porath, 2002; Deane & Todd, 1996), and the anticipated outcomes of seeking help (Vogel & Wester, 2003). For example, Hayward and Bright (1997) found that negative attitudes towards treatment and the stigma associated with mental illness held by the public may influence those who suffer from a mental illness. Fear of being stigmatized by the public has also been found to predict attitudes (Vogel, Wade, & Haake, 2006; Vogel, Wade, & Hackler, 2007) and intentions to seek help (Deane & Chamberlain, 1994; Deane & Todd). Similarly, self-stigma (i.e., the internalized negative stigma held by society) has been found to have a unique negative effect on attitudes towards and willingness to seek help (Vogel et al., 2006; Vogel et al., 2007). Along with the perceptions of stigma, counseling may be avoided because the anticipated outcomes of talking to a counselor may be seen as worse than the actual problem (Fisher, Goff, Nadler, & Chinsky, 1988; Vogel & Wester). Anticipated risks have been defined as the perception of the potential dangers of opening up to a mental health professional (Vogel & Wester). Anticipated benefits have been defined as the perceived utility of seeking services from a counselor (Vogel & Wester). By disclosing

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personal information to a counselor, a client risks feeling judged, ignored or misunderstood (Harris, Dersch, & Mital, 1999), and thus may choose to not seek help. Support for the importance of these anticipated outcomes has been explored, in general samples (Bayer & Peay, 1997; Kelly & Achter, 1995; Shaffer, Vogel, & Wei, 2006; Takeuchi, Leaf, & Kuo, 1988; Tinsley, Brown, de St Aubin, & Lucek, 1984; Vogel et al., 2006; Vogel et al., 2007; Vogel & Wester) and for those with symptoms of psychological distress (Vogel, Wester, Wei, & Boysen, 2005).

Despite the fact that little is known about the influence of specific psychological factors such as stigma (public and self) and anticipated outcomes (i.e., risks and benefits) on the help-seeking behavior of someone with unhealthy eating attitudes and behaviors, researchers have found evidence consistent with the importance of these factors. For example, women at risk for an eating disorder tend to have more negative attitudes about seeking help as a result of a fear of being labeled (i.e., desire to avoid public stigma; Cachelin & Striegel-Moore, 2006). Similarly, in a sample of high school females, the desire to keep the eating disorder private was reported as an important reason for not seeking help (Meyer, 2001). College students who exhibit patterns of disordered eating have also been found to hide such problems from almost everyone (Oliver, Reed, Katz, & Haugh, 1999). Furthermore, women with an eating disorder who do seek counseling often report initially not seeking help in an attempt to hide their disorder (Schwitzer, Rodriguez, Thomas, & Salimi, 2001). The shame associated with seeking help (i.e., self-stigma) is crucial to the formation of one's attitudes about seeking counseling for people with an eating disorder (Meyer, 2001; Cachelin & Striegel-Moore; Pike & Striegel-Moore, 1997). Many women experience shame and self-loathing and may be in therapy

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for a prolonged period-of-time before disclosing their eating disorder (Pike & Striegel-Moore). In addition, Cachelin and Striegel-Moore found the primary reason women at risk for an eating disorder reported not seeking help was shame.

The anticipated risks and anticipated benefits related to the outcome of therapy may also play an important role for those experiencing symptoms of an eating disorder. For example, many people with an eating disorder fear treatment because it may lead to weight gain (Pike & Striegel-Moore, 1997; Meyer, 2005). It has also been suggested that the nature of an eating disorder could cause individuals with a strong desire to stay thin to avoid or even fear seeking professional help (Meyer). Similarly, women with eating disorders report that they would prefer to talk to a friend first about their disorder, suggesting a possible aversion to seeking help from a mental health professional (Prouty, Protinsky, & Canady, 2002). In a study of group psychotherapy for eating disorders, participants reported the negative aspects of group therapy as having difficulty trusting others and not feeling safe in the group (Wanlass, Moreno, and Thompson, 2005). The findings from these studies suggest that people at risk for an eating disorder may anticipate certain risks and few benefits from seeking help.

Researchers have stressed the crucial need to better understand the specific reasons why women and men may avoid seeking help (Meyer, 2001; Pike & Striegel-Moore, 1997; Vandereycken & Meerman, 1984) in order to design effective interventions aimed at increasing the likelihood of seeking help for an eating disorder. The first part of this study aims to add to the current body of research by directly examining the role of self-stigma, and the anticipated risks and benefits in predicting attitudes toward counseling among a sample of individuals currently at risk for an eating disorder. It is

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hypothesized that for people with an eating disorder, self-stigma, and anticipated risks will have a negative relationship with attitudes towards seeking psychological help and anticipated benefits will have a positive relationship. In addition, it is hypothesized that a significant interaction between biological sex and attitudes will also be detected. Based on women's tendency to experience more positive attitudes towards counseling (e.g., Surgenor, 1985; Tata & Leong, 1994) and men's tendency to experience more stigma associated with counseling and more negative attitudes towards seeking help (Martin, Wrisberg, Beitel, & Lounsbury, 1997; Timlin-Scalera, Ponterotto, Blumberg, & Jackson, 2003, Vogel et al., 2006), it is hypothesized that self-stigma, anticipated risks, and anticipated benefits will have a greater relationship with attitudes towards seeking help for men than for women.

Furthermore, to start to better understand the impact of interventions aimed at increasing the likelihood of seeking help for an eating disorder have, part 2 examines the effectiveness of an educational intervention about eating disorders on stigma (public and self), anticipated outcomes (risks and benefits), and attitudes towards seeking help. National Eating Disorders Awareness Week and the National Eating Disorders Screening Program have emerged in the past two decades aimed at raising awareness of eating disorders on college campuses (National Eating Disorders Association [NEDA], 2002; Becker et al., 2004). Despite the implementation of these programs, little is known about the effects of such educational interventions on self-sigma, public stigma, anticipated risks, anticipated benefits, and attitudes towards counseling. This study aims to correct this omission by examining the effectiveness of a widespread eating disorders intervention, 'The Thin Line', on changing the factors identified in part 1 (i.e., self and

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public stigma; anticipated risks), as well as attitudes towards seeking counseling among college students. 'The Thin Line' is a play sponsored by NEDA to raise awareness and education on eating disorders. Such an analysis of a pre-existing intervention will allow researchers and clinicians to better understand the effects of this intervention in order to develop increasingly effective interventions in the future. It was hypothesized that 'The Thin Line' performance would decrease the self-stigma, public stigma, and anticipated risks and increase the anticipated benefits associated with seeking help for an eating disorder. In addition, it was hypothesized that there would be a significant interaction between biological sex and each of these factors: self-stigma, public stigma, attitudes, anticipated risks and anticipated benefits. Because men tend to have more negative views of counseling and associate it with more stigma (Martin et al., 1997; Timlin-Scalera et al., 2003, Vogel et al., 2006), it is hypothesized that the performance will significantly improve attitudes, self-stigma and public stigma, and the anticipated risks and anticipated benefits associated with seeking counseling for women more than for men.

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Review of the Literature

The goals of this literature review are to summarize the relevant help-seeking research in general and as it pertains to those experiencing or at-risk for an eating disorder, discuss the potential barriers to seeking help, and explore ways to decrease these barriers for individuals at risk for an eating disorder. This literature review is composed of 5 sections. The first section presents a general overview of help-seeking behavior for those with a psychological problem. The second section presents a brief overview of the prevalence and symptomology of eating disorders. The third includes a review of the current research examining the help-seeking behavior of those dealing with eating disorders and eating issues. The fourth section examines the potential barriers to seeking help for individuals experiencing an eating disorder or eating issues. Finally, the fifth section examines the previous use of interventions in changing attitudes about seeking help for an eating disorder.

Overview of Help Seeking in General

Researchers have investigated the critical components to the decision to seek psychological help. Some of the main factors identified by previous researchers include: sex and gender (e.g., Cohen, Guttmann, & Lazar, 1998), prior help-seeking experience (e.g., Deane & Todd, 1996), level of psychological distress (e.g., Deane & Chamberlain, 1994), perceptions of stigma (Deane & Chamberlain; Deane & Todd; Vogel et al., 2006; Vogel et al, 2007), anticipated risks (Deane & Todd; Deane & Chamberlain) and anticipated benefits (e.g., Vogel & Wester, 2003). The role of these factors on help seeking behavior is discussed in the following sections.

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Biological Sex

Females utilize mental health services more frequently (e.g., McKay, Rutherford, Cacciola, et al., 1996; Vessey & Howard, 1993; Rickwood & Braithwaite, 1994), indicate greater likelihood to seek help than males (Deane & Chamberlain, 1994; Husaini, Moore, & Cain, 1994), and have more positive attitudes towards counseling (e.g., Surgenor, 1985; Tata & Leong, 1994). Wills and DePaulo (1991) found that North American women are twice as likely to seek counseling than men. A study conducted by Andrews, Issakidis, and Carter (2001) surveyed 10,641 adults on current psychological symptoms, mental health service use, and perceived need for care. The dependent variables in the study included service use for anyone in the sample, service use among respondents with a current disorder, and perceived need for care among respondents with a current disorder who did not seek treatment. They found that women were more likely (odds ratio (OR) = 1.6) to seek help for a psychological problem than men (Andrews et al.).

Kessler, Brown, and Broman (1981) used data from four large-scale surveys from a total of 9,675 respondents, and found that even at comparable levels of distress, women were more likely to seek help than men. They also found that women were more likely to report having a serious life problem. Similarly, Chandra and Minkovitz (2006) surveyed 274 eighth graders in a suburban community and found that young women tend to turn to a friend first for emotional support while young men were more likely to talk to a family member. Young males also reported experiencing greater mental health stigma than females and young women were twice as likely as young men to report willingness to use mental health services. While men are less likely to seek help than women, they also tend to have more negative attitudes towards counseling than their female peers, especially

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young men (Chandra & Minkovitz; Gonzalez, Alegria, & Prihoda, 2005; Masuda, Suzumura, Beauchamp, Howells, & Clay, 2005).

One reason for these differences may be that males and females experience different social consequences related to expression of psychological issues or symptoms. For example, Hammen and Peters (1977) surveyed 189 females and 157 males on their reaction to case histories of responses to stress. Results showed that depression was linked to more rejection of males than females. Thus, while society tends to see counseling as a last resort for anyone (Angermeyer, Matschinger, & Riedel-Heller, 1999), this societal view may have a stronger influence on men. Consistent with this, Martin et al. (1997) surveyed 48 African American and 177 European-American college student athletes at a NCAA Division I university on attitudes toward seeking a sport psychology consultant. They found significant differences in stigma tolerance by sex such that male athletes perceived greater stigma associated with seeking help than females. In sum, these studies suggest that societal pressures may lead men to perceive more public stigma, and possibly more self-stigma, greater risks, and fewer benefits associated with seeking help for a psychological problem (Vogel et al., 2006). Therefore, the potential interaction of biological sex and these factors is examined in the current study.

Level of Psychological Distress

In a review of the literature on the role of psychological distress in predicting attitudes towards seeking help, most studies have found that psychological distress significantly and positively predicts willingness to seek counseling for a psychological problem (Cepeda-Benito & Short, 1998; Cramer, 1999; Komiya, Good, & Sherrod, 2000; Rickwood & Braithwaite, 1994). Researchers have also found that those who seek

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professional help for a psychological problem report experiencing greater levels of emotional distress and more symptoms of a mental disorder (Boyd, 1986; Yokopenic, Clark, & Aneshnsel, 1983). Yokopenic et al. (1983) studied the effects of depressive symptoms on problem recognition and use of mental health services. They surveyed a community sample of 1,000 adults residing in Los Angeles County, California and found that depressive symptoms were the strongest predictor of problem recognition. In addition, Yokopenic et al. found that depressive symptoms and prior use of mental health services increased the likelihood of seeking help for the problem. Similarly, Robbins and Greenley (1983) surveyed 1,502 university students and 156 students who sought help at the university psychiatric service. Respondents who rated their psychological symptoms as hindering their daily lives and damaging their emotional well-being were more likely to self-refer to the clinic than those who rated their problems as less severe.

Additional studies have been conducted examining the role of level of distress on seeking professional help for a psychological problem (Cepeda-Benito & Short, 1998; Cramer, 1999; Goodman, Sewell, & Jampol, 1984; Mechanic, 1975; Norcross & Prochaska, 1986). For example, Norcross and Prochaska surveyed mental health counselors, female psychologists, and community members on level of distress, type of distress, process of change, and mechanisms of coping. They found that people who reported seeking therapy as a means of treating their psychological problems were more likely to have been in therapy before, and to have experienced psychological distress for longer periods of time. In addition, current level of distress predicted perceived willingness to seek help for a psychological problem to the degree that the type of distress correlated with the reason for seeking help (cf. Kelly & Achter, 1995).

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Expanding on the research conducted by Kelly and Achter, Cepeda-Benito and Short surveyed 732 undergraduate students on their likelihood to seek counseling, attitudes towards psychotherapy, and psychological distress. They found that the type of problem and level of psychological distress predicted perceived likelihood of seeking help, especially if the specific reasons for seeking help aligned with the type of distress. However, while a number of studies have showed the importance of general psychological distress in the help-seeking process, few have focused on specific issues such as eating disorders that may be linked with factors influencing help-seeking decisions. Therefore, the first part of this study aims to address this omission in the literature by focusing on a sample at risk for an eating disorder.

The Role of Stigma in Help Seeking Behavior

Link and Phelan (2001) proposed that stigma occurs when differences among people are distinguished and labeled, when certain labeled persons are seen as different or an out group, and when those being labeled suffer some discrimination or loss of status. Being labeled with a mental health concern, in particular, has been linked to stigmatization. Ben-Porath (2002) administered one of four case vignettes to 402 undergraduate students in an introductory psychology class to investigate the effects of stigma on those seeking psychological help. All four vignettes were identical except for the last paragraph which manipulated treatment history (sought help versus did not seek help) and type of problem (depression versus back pain). Consistent with the hypothesis that people attach stigma to someone with a psychological illness more than a medical one, Ben-Porath found that participants rated someone with depression more negatively than someone with a physical injury. In addition, depressed individuals were rated as less

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interpersonally interesting, less competent, and more emotionally unstable. Given these findings, it is not surprising that people may avoid treatment in order to avoid being labeled negatively. In fact, researchers have consistently found that stigma plays a role in the decision to seek help (Ben-Porath; Deane & Todd, 1996). Similarly, concerns about being stigmatized have been linked to a reduction in a person's attitudes toward seeking help (Deane and Chamberlain, 1994). Deane and Chamberlain surveyed 263 university student volunteers on treatment fearfulness, anxiety, treatment expectations, and psychological distress, and help seeking. They found that stigma concerns represented a unique aspect of treatment fearfulness. In particular, stigma concerns and psychological distress were the only predictors of help-seeking intentions in college students. In a related study, Deane and Todd surveyed 107 university students from a non-clinical population on psychological distress, attitudes towards seeking help, treatment fearfulness, and help-seeking intentions. They found that the "social stigma concerns" scale on the Thoughts About Psychotherapy Survey (TAPS; Kushner & Sher, 1989) uniquely predicted attitudes towards seeking help for a psychological problem. Thus, the fear of being judged negatively by others for seeking help (public stigma) predicted attitudes towards doing so.

More recently, researchers have begun to break down the effects of stigma on attitudes towards seeking help into two types; public stigma and self-stigma (Corrigan, 1998; 2004). Corrigan (1998; 2004) asserted that public stigma refers to the negative perceptions and opinions held by others (i.e., by the public or by society) that the person needing psychological help is socially unacceptable. Self-stigma refers to the negative way the individual needing help may view him/herself as socially unacceptable, which

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oftentimes is accompanied by a loss of social opportunities (Corrigan, 1998). Self-stigma has been found to have a negative impact on self-esteem if the individual chooses to seek psychological help (Vogel et al., 2006). When someone internalizes public stigma or negative beliefs held by society, self-stigma may negatively affect attitudes towards and willingness to seek help (Vogel et al., 2006; Vogel et al., 2007). Individuals needing psychological help may internalize the negative views of society (Corrigan 1998, 2004; Holmes & River, 1998) which may lead to viewing themselves as weak, inferior, or inadequate (Nadler & Fisher, 1976). Link, Struening, Neese-Todd, Asmussen, and Phelan (2001) conducted a study looking at the effects of stigma on the self-esteem of people diagnosed with a serious mental illness. Participants were measured on self-esteem and perceived devaluation-discrimination. They found that perceptions of stigma strongly predicted self-esteem when controlling for baseline self-esteem, depressive symptoms, and diagnosis. Thus, Link et al. (2001) found support for the assertion that the stigma surrounding mental illness has a significant association with the self-esteem of those diagnosed with a psychological disorder. Directly examining the role of self-stigma on help-seeking attitudes and intentions, Vogel et al. (2006) developed the 10-item measure, Self-Stigma of Seeking Help (SSOSH). Across five studies, they gathered data on the reliability and validity of the scale. The results of these studies demonstrated that self-stigma is conceptually different from related constructs such as self-esteem and public stigma (Vogel et al.). In addition, self-stigma was found to uniquely predict attitudes towards and willingness to seek psychological help. Overall, Vogel et al. established that both public and self-stigma are important factors in help-seeking decisions.

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Anticipated Risks and Benefits of Seeking Help for a Psychological Problem

Along with stigma, counseling may be either sought out or avoided because of the anticipated outcomes of seeking help (Fisher et al., 1988, Goff, Nadler, & Chinsky, 1988; Vogel & Wester, 2003). Vogel and Wester identified two types of anticipated outcomes (anticipated risks and anticipated benefits), which have been found to be associated with factors related to seeking psychological help. Support for the importance of these anticipated outcomes has been gathered, in non-clinical populations (Bayer & Peay, 1997; Kelly & Achter, 1995; Tinsley et al., 1984; Vogel et al., 2006; Vogel et al., 2005; Vogel & Wester, 2003; Vogel et al., 2005) as well as for those experiencing symptoms of psychological distress (Vogel et al., 2005).

Anticipated risks have been defined as the perception of the potential dangers of opening up to another person (Vogel & Wester, 2003). By disclosing personal information to a counselor, a client risks feeling ignored, judged, or misunderstood (Harris et al., 1999), and thus may choose to not seek help. Thus, an “individual’s decision to seek counseling services must also involve the individual’s anticipated consequences of self-disclosing ... to a counselor” (Vogel & Wester, p. 352). In other words, individuals tend to consider the consequences and possible outcomes before deciding to seek psychological help. For example, Deane and Chamberlain (1994) examined the role of fear/risks of therapy on intentions to seek help by surveying 263 university students from a non-clinical sample on anxiety, treatment expectations, psychological distress, and help seeking. Results confirmed construct and concurrent validity of the scale as well as support for the assertion that fear of treatment (concerns over image, stigma, and coercion) has an effect on help seeking behavior. In a follow-up

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study, Deane and Todd (1996) surveyed 107 non-clinical university students on treatment fearfulness and intentions to seek help. Treatment fearfulness was found to account for almost 40% of the variance in attitudes towards seeking help.

In turn, anticipated benefits have been defined as the perceived utility or efficacy of seeking services from a counselor (Vogel & Wester, 2003). If a client's initial expectations are negative about the utility or usefulness of counseling, it may prevent them from deciding to seek counseling (Bayer & Peay, 1997). As such, researchers have found that individuals tend to assess the expected utility or usefulness of seeking counseling (Strong & Claiborn, 1982; Kelly & Achter, 1995). For example, Kelly and Achter found that at least 20% of their sample expressed concerns of the helpfulness or benefits of counseling, as a reason for their decision about whether to go to counseling. Vogel et al. (2005) also conducted two studies looking at the effects of the anticipated risks and anticipated benefits in predicting help-seeking decisions. In the first study, 354 college students from a large Midwestern university were surveyed on various factors involved in help-seeking behavior such as public stigma, treatment fears, anticipated risks, and anticipated benefits. Results showed that anticipated risks and anticipated benefits significantly predicted intent to seek help for interpersonal issues (Vogel et al.). Study 2 surveyed 1,128 college students from a large Midwestern university on factors such as anticipated risks, anticipated benefits, and type of psychological stressor. Vogel et al. found that the anticipated outcomes (anticipated risks and anticipated benefits) associated with talking to a counselor about personal emotional issues had an effect on the decision to seek help. Thus, both studies reported by Vogel et al. demonstrate the

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importance of the anticipated risks and anticipated benefits of seeking help on the decision to do so.

Eating Disorders

Eating Disorder Prevalence

Unhealthy eating attitudes and behaviors are common among adolescents and college age individuals. While researchers have found varying prevalence rates of eating disorders on college campuses, the numbers appear to be high. For example, anywhere from five to 15% of college students score in the positive category for disordered eating (Prouty et al., 2002; Stein, 1991). In addition, 10% of individuals with Anorexia Nervosa and Bulimia Nervosa are males as well as 25% of those with Binge Eating Disorder (APA, 1994; Fairburn & Beglin, 1990). Male adolescents have also been found to have a 6.5% lifetime prevalence rate of any eating disorder as compared to 17.9% in females (Kjelsas, Bjornstrom, & Gotestam, 2003).

Furthermore, 15-22% of women surveyed on college campuses report dieting on a regular basis (Kurth et al., 2005), leading Meyer (2005) to suggest that even college students who do not meet the diagnostic criteria for an eating disorder according to the *Diagnostic Statistical Manual of Mental Disorders- Fourth Edition Text Revised* (American Psychiatric Association, [APA], 2000) may engage in disordered eating behaviors that require treatment (Meyer, 2005; Shisslak, Crago, & Estes, 1995). Consistent with this, researchers have found that the majority of students who seek help at college counseling centers for disordered eating do not meet the specific diagnostic criteria (Schwitzer et al., 2001). For example, 91% of participants surveyed on a college campus reported that they have attempted to control their weight through dieting, and

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22% report dieting "often" or "always" (Kurth et al.). In another study, 98 college women (17%) were found to be at significant risk for an eating disorder (Protinsky, Protinsky, & Canady, 2002). Thus, while the prevalence of anorexia and bulimia is around 5-15% of a college student population, an even higher percentage of college students (15%-22%) experience symptoms of disordered eating and may benefit from treatment (Fairburn & Beglin).

Symptomology of Eating Disorders

In order to understand the severity and implications of eating disorders, it is important to explore their etiology and symptomology. Pike and Striegel-Moore (1997) note three classifications of eating disorders currently acknowledged in the field: anorexia nervosa, bulimia nervosa, and binge eating disorder. Anorexia nervosa (AN) is the most life-threatening eating disorder due to its often severe physical and psychological complications. It is characterized by a strong desire to be thin usually resulting in severe weight loss and amenorrhea in women. According to the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-IV*; APA, 1994), diagnostic criteria for AN includes: refusal to maintain minimal body weight for age and height, strong fears of weight gain, body image disturbance, failure to recognize low weight as a problem, and the absence of at least three consecutive menstrual cycles. Individuals experiencing AN are characterized by food and calorie restriction. Women make up more than 90% of diagnoses of Anorexia. While the disorder typically emerges between puberty and the age of 17 (APA, 1994), childhood-onset anorexia nervosa has been found to be a growing subgroup (Lask & Bryant-Waugh, 1992). Thus, it is clear that if left untreated, anorexia

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nervosa can have a severe course of illness and requires a better understanding of how we can increase rates of help seeking for those suffering from this disorder.

Individuals experiencing bulimia nervosa (BN) display the following characteristics: recurrent episodes of binge eating followed by self-induced vomiting, overuse of laxatives, enemas, extreme dieting, or excessive exercise (Pike & Striegel-Moore, 1997). *DSM-IV* (APA, 1994) criteria states that the individual must binge and engage in one of the previous listed forms of compensation at least twice a week for three months (APA, 1994). Similar to AN, young female adults comprise the largest percentage of individuals diagnosed with BN. Prevalence has been found to be between 1-3% of adult females (Fairburn & Beglin, 1990; Hoek, 1993; Kendler et al., 1991). In addition, individuals diagnosed with BN usually develop symptoms in late adolescence or early adulthood (Woodside & Garfinkel, 1992), display obsession and preoccupation with body weight and eating, and tend to weigh themselves often. Binge eating disorder (BED) is considered by the *DSM-IV* (APA, 1994) to be an example of an eating disorder not otherwise specified (EDNOS). Individuals experiencing BED engage in recurrent episodes of binge eating without the regular compensatory weight control tactics of people with bulimia nervosa. The *DSM-IV-TR* states that an individual must binge at least 2 days per week for a minimum of 6 months to meet the diagnostic criteria for BED (APA, 2000). Studies have found that 2% of adult females in the community fit the criteria for BED (Bruce & Agras, 1992; Spitzer, Devlin, Walsh, & Hasin, et al., 1992).

In addition to individuals who meet the criteria for AN, BN, and BED, there is also significant evidence supporting the assertion that many display symptoms of an eating disorder but do not fit into a diagnostic criteria (Shisslak et al., 1995). In their

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review of the literature on eating disorder prevalence, Shisslak et al. report that at least twice as many people in non-clinical populations have partial syndrome eating disorders than have full syndrome eating disorders. In addition, researchers estimate that between 2-13% of adolescents meet the criteria for EDNOS, Eating Disorder Not Otherwise Specified (Childress, Brewerton, Hodges, & Jarrell, 1993). In other words, someone with EDNOS does not meet the specific criteria for AN, BN, or BED, but still exhibits severe disordered eating behaviors. In fact, it is common for someone with EDNOS to have qualitatively the same eating disturbances but differing levels of severity or frequency (Pike & Striegel-Moore, 1997). Thus, an individual may not meet specific *DSM-IV* criteria for an eating disorder but could still have sufficient symptoms to warrant concern. It is important to recognize that aside from extreme changes in weight, some of the symptoms of eating disorders are not easily detected. As such, it may be even more important to identify the specific symptoms associated with eating disorders and treat the symptoms as early as possible (Pike & Striegel-Moore) as doing so may help with early detection and treatment.

In particular, it may be important to detect and treat the symptoms of an eating disorder early as there is evidence supporting the belief that eating disorders tend to progress from less to more severe disturbances over time (see review by Shisslak et al., 1995). In addition, once an actual diagnosis of an eating disorder is reached many people never fully recover. It is estimated that 40% of individuals diagnosed with anorexia nervosa recover, 30% improve, and 20% experience a chronic course of illness (Steinhausen, Rauss-Mason, and Seidel, 1991). Eating behavior among those suffering from AN may remain chronically problematic with symptoms of excessive dieting and

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often unremitting binge eating (Deter and Herzog, 1994). Furthermore, approximately 50% of people suffering from AN require continuous and repeated hospital visits.

Rates of Treatment Seeking for an Eating Disorder

While the consequences of not seeking treatment are high, an alarmingly small number of individuals suffering from an eating disorder or eating disorder symptoms report seeking professional help (Cachelin et al., 2001; Fairburn & Beglin, 1990). In a study conducted in England in 1995, 28% of individuals diagnosed with AN and 35% of individuals with BN reported seeking medical treatment for an eating disorder (Striegel-Moore et al., 2000). Additionally, researchers have found that only 17% of people with disordered eating symptomology report having sought medical help (Becker et al., 2004). Studies on community samples of women diagnosed with eating disorders have found that less than 50% report ever having sought medical treatment (Cachelin & Striegel-Moore, 2006). Although varying rates of treatment seeking have been found among those suffering from an eating disorder, it appears that there is still a need to examine inhibiting factors.

It is important to note that the majority of studies in this area have focused on seeking medical treatment rather than professional psychological treatment, and few have directly focused on seeking professional psychological help. Yager, Landsverk, and Edelstein (1987) conducted the first longitudinal study examining help seeking preferences for individuals with an eating disorder. They surveyed 641 individuals who, in 1984, fit the *DSM-III-R* diagnosis of anorexia nervosa, bulimia nervosa, anorexia with bulimic features, or sub-diagnostic eating disorder. This study was the first to longitudinally track a large number of individuals diagnosed with an eating disorder over

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time and found that 31.7% had never sought professional help. In a follow-up study, Yager, Landsverk, Edelstein (1989) examined help-seeking patterns for people with an eating disorder and found that 69.9% reported having sought professional treatment at some point in their lives. Participants diagnosed with anorexia nervosa with bulimic features were most likely to report having sought help at some point in the past (92.9%) while 60.6% of those with sub-diagnostic eating disorders reported past use of professional services. In addition, 52.9% reported a preference for individual psychotherapy followed by behavioral therapy (28.0%), group therapy (24.6%), and nutritional therapy (18.6%). While this study contributed information on lifetime history of treatment seeking, it did not specifically examine the role of specific factors (e.g., stigma, anticipated outcomes, and attitudes) in the decision to seek help for an eating disorder. Based on these findings, researchers have noted the need to explore the barriers to seeking help, such as negative attitudes, among those experiencing disordered eating attitudes and behaviors (Meyer, 2005; 2001).

Consequences of Not Seeking Help for an Eating Disorder

In light of the fact that many people experiencing symptoms of an eating disorder do not seek help, it is important to consider both the psychological and physical health consequences of this. In addition, it is necessary to investigate the effects of sub-clinical symptoms and disordered eating behaviors because they often lead to more severe eating disorders (Shisslak et al., 1995). Meyer (2001) asserts that it is crucial to understand the reasons why women and men may avoid seeking help for eating-related issues because they tend to be progressive and worsen over time (Pike & Striegel-Moore, 1997; Vandereycken & Meerman, 1984). Of specific relevance to the college population,

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researchers have found that the developmental stresses of college, such as separation and identify formation, may worsen the eating disturbances causing an increased risk to college students who do not seek help (Striegel-Moore, Silberstein, & Rodin, 1986).

If not treated, eating disorders have been found to have a severe and chronic course of illness including a number of psychological and medical co-morbidities (Fairburn & Brownell, 2002; Pike & Striegel-Moore, 1997). Medical illnesses associated with eating disorders include menstrual and reproductive problems, bone problems such as stress fractures and osteoporosis, and gastrointestinal, cardiovascular, and dental problems (Pike & Striegel-Moore). Eating disorders have also been found to result in mortality for 3.4% to 5.1% of people suffering from anorexia nervosa (Crow et al., 1999; Herzog et al., 2000; Lee et al., 2003). In a study analyzing mortality rates of 27 mental disorders from a national database between 1966-1995, the highest risk for premature death was found for people with comorbid substance abuse and eating disorders (Harris & Barraclough, 1998). In addition, the health service cost of treating and managing care for people with eating disorders is substantial (Striegel-Moore & Leslie, 2000). The average hospital stay for women suffering from any diagnosis of an eating disorder was found to be 20.74 days with an average cost of $12,432. These findings support the need for further examination of factors that inhibit help seeking for an eating disorder in order to increase service use.

Eating disorders come with a high likelihood of comorbidity with various other psychological disturbances. For example, they have been found to be highly co-morbid with substance abuse, affective disorders (e.g., anxiety and depression), and suicidal behavior (Fairburn & Brownell, 2002) for people with anorexia nervosa (Herzog et al.,

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2000; Santonastaso, Pantano, Panarotto, & Silvestri, 1991) bulimia, and binge eating disorder (Kendler et al., 1991; Yanovski, Nelsen, Dubbert, & Spitzer, 1993). Eating disorders have also been found to be linked to problems with social and interpersonal functioning such as within family systems (Attie & Brooks-Gunn, 1992; Pike & Rodin, 1991) and within peer networks (Grilo, Wilfrey, Brownell, & Rodin, 1994; Striegel-Moore et al., 1993). Evidence for the severe course of illness of eating disorders provides support for the necessity of further examination of the factors inhibiting people from seeking help for such a disorder. In addition, findings from studies examining these factors could help inform interventions aimed at increasing the likelihood of seeking help for an eating disorder.

Factors Influencing Help-seeking Behavior for Someone with an Eating Disorder

Stigma. The majority of recent studies on eating disorders have focused on seeking medical treatment rather than professional psychological treatment for eating disorders. This study seeks to investigate the factors contributing to seeking professional psychological help for an eating disorder. Public and self-stigma may play a role in attitudes towards seeking help for an eating disorder. For example, secrecy and concealment have been found to play a role for people with disordered eating (Shaw & Garfinkel, 1990). Related to this, shame and fear of judgment appear to be important factors inhibiting people from seeking help for an eating disorder (Sanftner, Barlow, Marschall, & Tangney, 1995; Silberstein, Striegel-Moore, & Rodin, 1987). People highest on disordered eating symptomology have been found to be least likely to feel comfortable self-disclosing (Le Grange, Tibbs, & Selibowitz, 1995). College students with disordered eating attempt to hide such problems from almost everyone (Oliver et al.,

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1999). While these studies did not directly examine help-seeking behavior, they do suggest a connection between the presence of eating symptomology and the desire to conceal personal information, which may hinder someone from seeking help for an eating disorder.

Recently, studies have also identified stigma as a possible barrier to seeking help for people experiencing symptoms of an eating disorder. Previous studies found that individuals did not want to self-disclose because of self-stigma and feeling negatively about oneself for having such a disorder (Ben-Porath, 2002; Deane & Todd, 1996). Consistent with this, Cachelin and Striegel-Moore (2006) found that women at risk for an eating disorder experienced a fear of being labeled and thus more negative attitudes about seeking help (i.e., desire to avoid public stigma). Women who do seek counseling for an eating disorder often cite a desire to hide the disorder as a reason for not initially seeking help (Schwitzer et al., 2001). The shame associated with seeking help (i.e., self-stigma) is crucial to the formation of one's attitudes about seeking counseling for an eating disorder (Cachelin & Striegel-Moore; Meyer, 2001; Pike & Striegel-Moore, 1997). Many women experience shame and self-loathing which negatively affects the way they view themselves (self-stigma) and may be in therapy for prolonged periods of time working on other psychological problems such as depression and anxiety before disclosing their eating disorder to a counselor (Pike & Striegel-Moore). The primary reason women at risk for an eating disorder reported not seeking help was shame and fear of being labeled as having a disorder (i.e., public stigma; Cachelin & Striegel-Moore). Thus, it appears that having an eating disorder may negatively affect the way people feel about themselves (self-stigma) as well as their assessment of the way others will view them

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(public stigma), which may have an important influence on attitudes towards seeking help for the disorder.

Anticipated benefits and anticipated risks. The anticipated benefits and anticipated risks related to the outcome of therapy may play an important role for those experiencing symptoms of an eating disorder. For example, many people with an eating disorder may decide not to seek treatment because they do not see many benefits. In 2001, Meyer conducted the first study directly looking at psychological treatment seeking patterns and barriers among high school juniors experiencing symptoms of disordered eating. In this study of 238 high school juniors, over half of those reporting symptoms of disordered eating did not report believing there was a need for counseling. Similarly, in a subsequent study, only 56% of college women with disordered eating symptoms reported thinking their symptoms were severe enough to need therapy (Meyer, 2005). It has also been suggested that the nature of an eating disorder could cause individuals with a strong desire to stay thin to avoid or even fear seeking professional help (Meyer, 2005; Pike & Striegel-Moore, 1997).

Additionally, risks associated with seeking help may be an inhibiting factor for someone at risk for an eating disorder. For example, difficulty trusting others and wanting to feel safe have been reported as reasons not to seek group counseling for an eating disorder (Wanlass et al., 2005). Women with eating disorders report that they would prefer to talk to a friend first about their disorder, suggesting a possible aversion to seeking help from a mental health professional (Prouty et al., 2002). In a study of group psychotherapy for eating disorders, participants reported having difficulty trusting others and not feeling safe in the group (Wanlass et al.). Since research has shown that the

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course of illness is severe and people may anticipate fewer benefits and increased risks from seeking help for an eating disorder, it is crucial that researchers continue to investigate the factors influencing attitudes towards seeking help in order to develop effective ways to improve these negative attitudes towards seeking professional help.

Interventions to Increase Help Seeking

While few studies have focused specifically on increasing the likelihood that people experiencing an eating disorder seek help, studies have shown interventions can improve attitudes towards therapy in general. Gonzalez et al. (2002), for example, conducted a study of college students examining the effects of an intervention on opinions of mental illness, attitudes toward seeking help, and expectations about psychotherapy. The intervention included normalizing statements about mental illness, explained possible causes of mental illness, and emphasized the importance of seeking help for a psychological problem. Results showed that those in the intervention group reported significant improvement in attitudes toward seeking help one month later. While these findings might also apply to people with an eating disorder, it would be helpful to directly study the effects of an intervention aimed at increasing knowledge of eating disorders on attitudes towards seeking professional psychological help.

Other educational efforts in schools have shown some promise. Schulze, Richter-Werling, and Angermeyer (2003) studied the effects of a school project on German students' attitudes towards people with schizophrenia. The goal of the study was to reduce the stigma associated with schizophrenia. The school program 'Crazy? So what!' was part of the World Psychiatric Association's Global Program against stigma and discrimination towards schizophrenia. It consisted of a week-long intervention including

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personal contact with someone with schizophrenia, emphasis on the similarities between students and persons suffering from schizophrenia, general education on the importance of mental health, information dissemination, and discussion of the stigma resulting from schizophrenia. The study aimed to assess the effectiveness of such an intervention on altering stigma and discrimination towards people with schizophrenia. Results demonstrated that the program positively affected stereotypes of the students towards people suffering from schizophrenia.

Similarly, Wallach (2004) conducted a study on changes in attitudes among college students in a psychology course following exposure to persons with mental illness. Building on the evidence that experience is a crucial ingredient to attitude change (Angiullo, Whitbourne, & Powers, 1996; Drolen, 1993; Keane, 1991; Rousseau & DeMan, 1998), students were required to visit a mental health institution as part of the course. Participants were asked to rate their opinion of mental illness (OMI; Cohen & Struening, 1962). Positive attitudes were found to increase significantly from pretest to posttest (Wallach, 2004). In sum, a number of studies have shown the benefits of educational interventions in improving attitudes towards seeking professional help for a psychological problem. However, these findings need to be extended to the specific case of eating disorders.

Interventions Aimed at Changing Attitudes Towards Seeking Help for an Eating Disorder

Researchers have begun to acknowledge the need for the development of interventions aimed at increasing the likelihood of seeking help for an eating disorder and eating related issues, especially on college campuses (e.g., Prouty et al., 2002). Some researchers emphasize the importance of integrating educational material into current

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curricula to include education on body image, healthful eating, exercise, and the types of mental health and medical services available (Prouty et al.). Similarly, outreach activities should be implemented to spread information to college students living in dormitories, sororities, and fraternities (Shisslak et al., 1987).

The first National Eating Disorders Screening Program (NEDSP) was started on college campuses across the United States in 1996 (Becker et al., 2004). The program included a self-report screening questionnaire and an in-person interview with a counselor. Researchers measured the effectiveness of this program (Becker et al.). An overwhelming majority (81%) of participants in the NEDSP Screening Program study reported that it raised their awareness of eating disorders, their dangerous symptoms, and treatment options (Becker et al.). A considerable number of participants (32%) reported that the intervention helped them disclose their problem and 28% said that it encouraged them to seek counseling. Of the participants who received a recommendation to seek help for disordered eating, 47.7% made a first appointment. The results from this study demonstrate the importance and significance of such interventions in raising awareness of eating disorders as well as helping people in the decision to seek help for such a problem.

A related program, National Eating Disorders Awareness Week, was started in 1987 to raise awareness of eating disorders (NEDA, 2002). In 1998, NEDA began sponsoring the performance of a play called 'The Thin Line,' aimed at raising awareness and increasing knowledge of eating disorders, has been performed in 18 states and seen by over 50,000 people in the United States. Despite the wide use of this program, however, to date, no studies have been conducted on the effectiveness of 'The Thin Line' on changing attitudes towards seeking help for an eating disorder. In fact, only one study

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has looked at the effects of an eating disorder intervention on people's willingness to seek help (see Becker et al., 2004) and none have looked at the effects of a specific intervention on the factors that may influence general attitudes towards seeking help for eating issues. In addition, researchers have argued for the development of interventions that reach people early in the development of an eating disorder (Kaminski & McNamara, 1996; Scarano & Kalodner-Martin, 1994; Weiss, Katzman & Wolchik, 1985) and for those who do not fit the specific diagnostic criteria for an eating disorder (Schwitzer et al., 2001). Thus, there is a need to assess the effects of 'The Thin Line' on perceptions of stigma, expectations about the risks of seeking help, and attitudes towards seeking help for an eating disorder. This program was chosen for analysis because it provides information on the physical and psychological symptoms of an eating disorder as well as the negative effects on relationships with friends and family members. Thus, it demonstrates the potential severity of symptoms if the disorder goes untreated and shows the role of counseling in treatment for an eating disorder.

Rationale for Part 1 of this study

Despite awareness and discussion of factors that may play a role in an individual's willingness to seek help, studies have not directly examined their association with attitudes towards seeking help among individuals experiencing or at-risk for an eating disorder. The goal of the first part of this study was to assess the relationship between self-stigma, anticipated benefits, and anticipated risks associated with counseling on attitudes towards seeking psychological help among individuals at risk for an eating disorder.

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Hypothesis 1

It is hypothesized that self-stigma, as well as the anticipated benefits and anticipated risks associated with seeking help, will predict attitudes toward seeking psychological help for an eating disorder among a sample of college students at-risk for an eating disorder. In addition, it was hypothesized that a significant interaction between biological sex and attitudes would be detected. Since women tend to have more positive attitudes towards seeking help for a psychological problem (e.g., Surgenor, 1985; Tata & Leong, 1994) and men tend to experience more societal pressure to not seek counseling (Martin et al., 1997; Timlin-Scalera et al., 2003, Vogel et al., 2006), it was hypothesized that self-stigma as well as anticipated risks and anticipated benefits would have a stronger relationship with attitudes towards seeking help for men than for women.

Rationale for Part 2 of this study

Since research has shown that very few people suffering from an eating disorder seek professional help and those who suffer from only a few symptoms will likely progress to a more serious disorder (Striegel-Moore et al., 1986), it is important to assess the effectiveness of an intervention such as 'The Thin Line' aimed at influencing self-stigma, public stigma, anticipated risks, anticipated benefits, and attitudes toward seeking counseling. Interventions aimed at changing attitudes, self-stigma and public stigma as well as anticipated risks and benefits about seeking help for an eating disorder may be beneficial for those who meet the diagnostic criteria as well as those who exhibit only some of the symptoms (Schwitzer et al., 2001). In addition, researchers have found that early interventions are critical to the treatment of eating disorders (Kaminski & McNamara, 1996; Scarano & Kalodner-Martin, 1994; Weiss et al., 1985). Thus, it is

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important to reach those suffering from an eating disorder with an effective intervention as early as possible.

Such an analysis of an already-existing intervention will help researchers and clinicians develop increasingly effective interventions in the future. Researchers such as Mintz, O' Halloran, Mulholland, and Schneider (1997) have suggested that college counselors, in particular, can play an instrumental role in educating high-risk groups about eating disorders. Mintz et al. (1997) argues that such educational interventions and programs can raise awareness of the negative effects of eating disorders. In particular, it may be important to gear outreach efforts toward reducing the stigma and anticipated risks associated with counseling and psychological problems. The goal of the second part of this study was to assess the effect of a specific intervention, 'The Thin Line', on changing self-stigma, public stigma, anticipated risks, anticipated benefits, and attitudes towards seeking counseling for eating-related problems.

Hypothesis 2

It was hypothesized that an intervention designed to raise awareness of eating disorders would decrease self-stigma, public stigma, and anticipated risks while increasing attitudes towards seeking help and anticipated benefits. In addition, it was hypothesized that a significant interaction between biological sex and the factors predicted to be important in help-seeking behavior (self-stigma, public stigma, attitudes, anticipated risks, anticipated benefits) would be detected. As noted above, differences in women's and men's attitudes towards counseling (e.g., Surgenor, 1985; Tata & Leong, 1994) and perceptions of the anticipated outcomes and stigma (Martin et al., 1997; Timlin-Scalera et al., 2003, Vogel et al., 2006), may impact the effectiveness of the

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performance. Specifically, the performance was predicted to have a more of an impact on men than women in terms of attitudes, self and public stigma, and the anticipated outcomes associated with seeking counseling.

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Method

Participants

Part 1. The sample for part 1 of this two-part study was comprised of students from undergraduate psychology courses at a large Midwestern university who met the criteria for disordered eating (score of 20 or higher on the EAT-26; Garner, Olmsted, Bohr, & Garfinkel, 1982). A total of 145 students participated. The majority of the sample consisted of female students (85.5%), with 14.5% of the sample comprised of male students. Caucasian/White (87.6%) students comprised the majority of the sample. Students identifying as African-American (5.5%), multi-racial American (2.8%), Latino-American (1.5%), Asian-American (1.4%), Native American (1.4%), and international (.7%) comprised the rest of the sample. The proportion of students from various racial and ethnic identities was relatively representative of this university's undergraduate student population: 88.1% Caucasian/White, 3.3% Asian-American/Pacific Islander, 2.3% Hispanic, 2.9% African-American, 0.3% American Indian/Alaskan, 3.1% international students.

Part 2. Students (N = 676) from undergraduate psychology courses at a large Midwestern university comprised the sample for part 2. Over half of the sample consisted of female students (58.3%) and more than one-third (36.1%) were male students with 38 students who did not respond to the biological sex question (5.6%). The majority of the sample consisted of students identifying as Caucasian/White (84.5%). Students also identified as Asian American (3.6%), Latino-American (1.5%), African-American (2.1%), multi-racial American (0.6%), Native American (0.1%), and international (1.2%). Five students (0.7%) indicated their race/ethnicity as "other," and thirty-nine (5.8%) did

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not respond to this question. As noted above, the proportion of students from various racial and ethnic identities was relatively representative of this university's undergraduate student population. In addition, 12.5% (82 out of 676) of the sample met the cut-off for disordered eating (score of 20 or above on the EAT-26; Garner et al., 1982), which is consistent with previous studies (5-15%; AABA, 1999; Kurth et al., 1995; Prouty et al., 2002; Stein, 1991).

Measures

Eating attitudes. The Eating Attitudes Test-26 (EAT-26; Garner et al., 1982) is a widely used self-report screening measure for the symptoms of anorexia nervosa and bulimia nervosa. The EAT-26 (see Appendix B) is a shortened version of the original EAT which consisted of 40 items (Garner & Garfinkel, 1979). Garner et al. eliminated 14 items after running factor analysis and determining the items to be redundant. The EAT-26 has three subscales measuring dieting, oral control, and bulimia and food preoccupation, however, the total EAT-26 score is also calculated and a cut-off score of 20 is used to signify high disordered eating (Nelson, Hughes, Katz, & Searight, 1999; Eating Attitudes Test- Eating Disorder, 1999; Garner et al.). A sample item from the Dieting subscale includes, "Aware of the calorie content of the foods that I eat" (Garner et al.). A sample item from the Oral Control subscale is, "Cut my food into small pieces." An item from the Bulimia and Food Preoccupation scale includes, "Have the impulse to vomit after meals."

The EAT-26 is scored on a 6-point Likert-type scale ranging from 0 (*always*) to 5 (*never*). Participants are asked to indicate how often each of the items in the questionnaire applies to them. Responses are then weighted from 0 to 3, with a response

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of *always* equaling three points, *usually* equaling 2 points, and *often* equaling 1 point. Responses of *sometimes*, *rarely*, or *never* equal zero points. The EAT- 26 has been used in studies both in the US and abroad (e.g., Nelson et al., 1999; Williams, Schaefer, Shisslak, Gronwalt, & Comerci, 1986). The internal consistency for the total EAT-26 is reported to be .90 (Garner et al., 1982). Miller, Schmidt, Vaillancourt, McDougall, & Laliberte (2006) found the reliability coefficient to be excellent (.90). In addition, the EAT-26 subscales have been found to significantly correlate with scales on the TAS-20 (Toronto Alexithymia Scale-20; Bagby, Parker, & Taylor, 1994). The Difficulty Identifying Feelings Scale (DIF; $r = .24$), and the Difficulty Describing Feelings Scale (DDF; $r = .20$) were found to correlate with the EAT-26 dieting subscale (Miller et al., 2006). In addition, the EAT-26 Bulimia and Food Preoccupation scale was found to significantly correlate with the DIF ($r = .35$) and the DDF ($r = .31$). For Part 1 of the current study, the coefficient alpha (Cronbach's α) for the total EAT score was 0.6. For Part 2, the coefficient alpha for time 1 was .84 for the overall EAT score (see Table 1 for the alpha coefficients by time point). Eat subscales were not used in the analysis in this study.

Self-stigma. Peoples' beliefs about how they will be viewed if they seek help for an eating disorder were measured with the Self Stigma of Seeking Help Scale (SSOSH; Vogel et al., 2006). The SSOSH (see Appendix C) is a 10-item 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Scale point 3 represents *agree and disagree* equally. Sample items include: "I would feel inadequate if I went to a therapist for psychological help," and "My self-confidence would not be threatened if I sought professional help." The SSOSH has no subscales and items 2, 4, 5, 7, and 9 are

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reverse-scored. Vogel et al. reported internal consistency (a = .86 to .90) and two-week test-retest (r = .72) reliabilities. Vogel et al. also found the SSOSH to correlate with the Attitudes Towards Seeking Professional Psychological Help (ATSPPH) (r = -.53 to -.63) and Intention to Seek Psychological Help (r = -.32 to -.38). For Part 1 of the current study, the coefficient alpha for the Self Stigma of Seeking Help Scale was .91. For Part 2 of the current study, the coefficient alpha at time 1 was .92 (see Table 1 for the alpha coefficients by time point).

Public stigma. The Public Stigma for Seeking Help Scale (PSOSH; Vogel et al., 2007) aims to measure peoples' beliefs of how others will respond to them if they seek help for a psychological problem. The PSOSH (see Appendix D) includes 17 items asking participants to rate the degree to which they believe people would react to them in a certain way for seeking professional help for an eating disorder on a 5-point Likert-type scale ranging from 1 (*not at all*) to 5 (*a great deal*). Through factor analysis, the 17 items were found to be broken down into three subscales consisting of 7 items measuring Negative Reactions, 5 items measuring Positive Reactions, and 5 items measuring Sympathy. A sample item for the Negative Reactions subscale is "See you as seriously disturbed." A sample item for the Positive Reactions subscale includes "Believe you were intelligent." A sample item for the Sympathy subscale is: "Feel sympathy for you." The internal consistency has been reported to be .90 for the Negative Reactions subscale and .82 for the Positive Reactions subscale (Vogel et al.). The Negative Reactions and Positive reactions subscales are also significantly correlated with self-stigma (-.33 and .41, respectively), public stigma (-.30 and .35, respectively), and attitudes towards seeking professional psychological help (.24 and -.19, respectively). For Part 1, the

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Public Stigma of Seeking Help Scale was not administered. For Part 2, the coefficient alpha at time 1 for the Negative Subscale was .89, .82 for the Positive Subscale, and .86 for the Sympathy Subscale (see Table 1 for the alpha coefficients by time point).

Attitudes towards seeking professional help. This construct was measured with the Attitudes Toward Seeking Professional Psychological Help Scale (ATSPPHS; Fischer & Farina, 1995). The ATSPPHS (Appendix E) is a shortened 10-item version of the original 29-item measure (ATSPPHS, Fischer & Turner, 1970), consisting of items such as "The idea of talking about problems with a psychologist strikes me as a poor way to get rid of emotional conflicts". Items are rated on a 4-point scale ranging from 1 (*disagree*) to 4 (*agree*). There are no subscales for the ATSPPHS and items 2, 4, 8, 9, and 10 are reverse-scored. Fischer and Farina found that the shortened version of the ATSPPHS is correlated with the original version ($r = .87$). Fischer and Farina also reported one-month test-retest ($r = .80$) and internal consistency ($r = .84$) reliabilities. The ATSPPHS has been used by Fischer and Farina to separate those who have positive attitudes about seeking professional help for a psychological problem from those who do not. In addition, the ATSPPHS has been found to correlate negatively with self-concealment tendencies ($r = -.19$) and positively with intentions to seek counseling for psychological concerns (Vogel et al., 2005). For Part 1 of the current study, the coefficient alpha for the Attitudes Towards Seeking Professional Psychological Help was .85. For Part 2 of the current study, the coefficient alpha at time 1 was .87 (see Table 1 for the alpha coefficients by time point).

Anticipated risks and anticipated benefits. The Disclosure Expectations Scale (DES; Vogel & Wester, 2003) was used to assess anticipated risks and anticipated

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benefits of talking to a counselor about a psychological problem. All 8 items on the DES (see Appendix F) are rated on a 5-point Likert-type scale ranging from 1 (*not at all*) to 5 (*very*). The 8 items are divided into two subscales: Anticipated Risks and Anticipated Benefits. A sample item for Anticipated Benefits is "If you were dealing with an emotional problem, how beneficial for yourself would it be to self-disclose personal information about the problem to a counselor?" A sample item for Anticipated Risks is "How worried about what the other person is thinking would you be if you disclosed negative emotions to a counselor?" Responses for each subscale are totaled with higher scores representing more anticipated risk and more anticipated benefits. The anticipated risks subscale correlates positively with self-concealment (r = .26) and negatively with self-disclosure (r = -.17). The subscale anticipated benefits has been found to correlate positively with self-disclosure (r = .24) and negatively with self-concealment (r =.12; Vogel & Wester). The internal consistency was previously found to be .81 for Anticipated Benefits and .80 for Anticipated Risks (Vogel et al., 2005). For Part 1 of the current study, the coefficient alpha was .86 for the Anticipated Risks Subscale, and .82 for the Anticipated Benefits subscale. For Part 2 of the current study, the time 1 coefficient alpha for the Anticipated Risks Subscale was .82 and .85 for the Anticipated Benefits Subscale (see Table 1 for the alpha coefficients by time point).

Procedure

Part 1. Participant scores used in Part 1 of this study were drawn from two semesters of the psychology department's mass testing data collection (Fall 2005 and Spring 2006). Internal Review Board Approval for Fall 2005 and Spring 2006 Mass Testing was obtained on August 2, 2005 (IRB # 01-139; see Appendix Q). Participants

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were originally contacted through their psychology classes and asked to participate in the Psychology department's Mass Testing procedures. Mass Testing is conducted each semester and includes a number of scales submitted by researchers in the Psychology Department. Before responding to the items on the test, participants were asked to read and sign the Mass Testing Informed Consent Document (Appendix G). Next, participants were asked to respond to questions on a number of scales including EAT-26, SSOSH, ATSPPHS, DES, and demographic variables including biological sex, ethnicity/race, and year in school (see Appendix A, B, C, E, F). After taking the survey, participants were asked to read the debriefing document (see Appendix H), explaining the purpose of the study. Participation in any part of this study was voluntary and participants received research credit in their psychology class. Data collected in the Fall of 2005 and Spring of 2006 Mass Testing was combined (N = 1658) and respondents who scored above 20 (n = 145), on the EAT-26 (Garner et al., 1982) were selected for analysis in this part of the study. Similar to previous studies (5-15%; AABA, 1999; Kurth et al., 1995; Prouty et al., 2002; Stein, 1991), 8.7% of the students met the cut off for disordered eating.

Part 2. Internal Review Board Approval for this study was obtained on January 30, 2006 (IRB # 06-027; see Appendix R). All undergraduate psychology students who particpated in Mass Testing in the Spring of 2006 (IRB # 01-039; see Appendix Q) were contacted by email (see Appendix L) and asked to complete an online survey (N=1043). Participants were asked to read the informed consent document (see Appendix I) on the first page of the online study and click "yes" if they consented to participate and "no" if they declined participation. If they declined participation, they were automatically directed to the debriefing statement at the end of the survey (see Appendix K). If they

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agreed to participate, they were directed to the survey (see Appendix A-F). The following scales were included in the online survey: EAT-26; SSOSH, PSOSH, ATSPPHS, the DES, and some demographic questions including biological sex, ethnicity/race, and year in school. A study notification was also posted in the Psychology Department building advertising the online, three-part study (see Appendix P) and informing students that they could contact the researcher if they wanted to participate.

Seven-hundred and twenty two of the 1043 students contacted to participate completed the online survey resulting in a response rate of 69.2%. After completing the survey (n = 722), participants who provided complete contact information (n = 700) were randomly assigned to either the control or treatment condition for the second part of the study. Random numbers were generated and assigned to each participant and then sorted by their assigned random number. The first 400 were assigned to the treatment condition and the rest (300) were assigned to the control condition. More students were assigned to the treatment group than the control due to the added participant burden of attending a performance and the expectation of attrition in the treatment group. Two weeks after the initial online survey, participants assigned to the treatment condition received an email (see Appendix M) asking them to attend "The Thin Line," a performance regarding the impact of eating disorders. The email also informed them that the performance was part of National Eating Disorders Awareness Week and would be performed by actress Rose Solomon. 'The Thin Line' is a thirty-minute performance on the effects of eating disorders. It tells the story of a young woman who has a serious eating disorder and its impact on her family and friends.

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To minimize any possible emotional risks, participants assigned to attend 'The Thin Line' (the treatment group) received another informed consent document (see Appendix J) in the form of an email attachment inviting them to participate in the study. It informed them of the content of the performance (eating disorders) and provided the opportunity to decline participation. Participants were asked to print it out, sign it, and return it to the researcher in order to get credit for the study. A reminder email (see Appendix O) was sent to participants in the treatment group three days after the initial email informing them of the study and inviting them to participate. In addition, participants were asked to sign in when they arrived at the performance to verify their attendance. After 'The Thin Line' performance (i.e., Time 2), participants in both conditions (treatment and control) received an email (see Appendix N) asking them to complete the same online survey taken at Time 1 (see Appendix A-F). A question was added to the survey at Time 2 asking if participants had attended the performance to serve as a check to ensure they attended.

Four weeks after the performance, participants in both groups were asked to take the same online survey for a third time (see Appendix A-F) to test for lasting effects of the treatment. Researchers informed participants that participation in any part of the study was entirely voluntary and that they would receive extra credit in their psychology class. At the end of the online surveys, participants read the debriefing document (see Appendix K) which included contact information for counseling services if needed. In the treatment group, 290 of the 400 students invited to participate (72.5%) attended the performance 'The Thin Line,' and completed the follow-up questionnaire. In the control group, 227 of the 300 participants invited (75.7%) completed the questionnaire at time 2. Lastly, 210

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participants in the treatment group and 175 in the control group completed the follow-up questionnaire that was administered one month after 'The Thin Line' performance. Overall, 385 of the original 700 (55%) participants took the survey at all three time points. For participants who were missing more than 10% of the data, their data was dropped from the study. If participants were missing less than 10% of data, the mean value for the scale was imputed and this value was given to the participant with missing data. Thus, after removing participants missing more than 10% of data, the final total sample for Part 2 of this study was 676.

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Results

Part 1

Descriptive statistics. Table 2 lists the zero-order correlations, means, and standard deviations for the five observed variables.

Predicting attitudes. In order to examine the role of biological sex, self-stigma, anticipated risks, and anticipated benefits in predicting attitudes towards seeking help among people who met the cut-off for disordered eating (above 20 on the EAT-26; Garner et al, 1982), a multiple hierarchical regression was calculated. Four possible predictors of help-seeking attitudes were included in the model: (a) participants' biological sex (0= male, 1 = female); (b) self-stigma (SSOSH), (c) anticipated risks (DES); and (d) anticipated benefits (DES) of seeking professional psychological help for an eating disorder. In the first step of the regression, participant sex, self-stigma, anticipated risks, and anticipated benefits were included. In step two, the interaction terms between sex and self-stigma, sex and anticipated risks, and sex and anticipated benefits of seeking help were added to the model to examine the possible moderating effects of sex. Before creating the interaction terms, the continuous variables (self-stigma, anticipated risks, and anticipated benefits) were standardized by calculating Z-scores for the continuous variables of interest in order to reduce multiculinearity among the predictors and their interaction terms (see Cohen, Cohen, West, & Aiken, 2003).

It was hypothesized that participant sex, self-stigma, anticipated risks, and anticipated benefits would have a significant effect on attitudes towards seeking help among a sample of people at-risk for an eating disorder. Consistent with this, the overall regression (see Table 3) was significant, $F(4,144) = 47.63$, $p < .001$, ($r = .76$, $r^2 = .58$, adj.

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$r^2 = .57$). Furthermore, each of the predictors [self-stigma ($\beta = -.34$), anticipated risks ($\beta = -.19$), anticipated benefits ($\beta = .64$)] except biological sex contributed a unique and significant explanatory effect to attitudes towards seeking help for people who met the cut-off for disordered eating. Thus, the results of the regression analysis support the hypothesis.

It was also hypothesized that there would be an interaction between the factors predicted to be linked with attitude scores and biological sex. Step 2 of the hierarchical multiple regression analysis, with the inclusion of the interaction term (biological sex), was also significant, $F(7, 144) = 28.92$, $p < .001$, ($r = .77$, $r^2 = .60$, adj. $r^2 = .58$). Furthermore, the interaction of self-stigma and biological sex as well as anticipated benefits and biological sex contributed a unique effect on attitudes towards seeking help (see Table 3). Thus, biological sex by itself did not have a unique association with attitudes but when added to the model as part of an interaction term, it was found to have a significant moderating effect on self-stigma and anticipated benefits but not for anticipated risks. The regression equation $\hat{y} = b_o + b_1x_1 + b_2x_2 + b_3(x_1x_2)$ was used to calculate the predicted attitude scores resulting from the interaction of biological sex and self-stigma as well as the interaction between biological sex and anticipated benefits. Results demonstrate that for self-stigma, there is a significant effect for males and not females such that as self-stigma goes up, attitudes towards seeking help becomes worse for males but not for females (see Figure 1). In turn, as anticipated benefits increase, attitudes improve for females but not for males (see Figure 1).

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Part 2

Descriptive Statistics. Table 4 list the means and standard deviations for all observed variables measured in Part 2 of this study at time 1, 2, and 3. Tables 5-7 list the zero-order correlations for the observed variables at time 1, 2, and 3, respectively.

Differential attrition. Since a certain amount of attrition was found between time 1 and time 3 (39.56% dropped out), chi-square analyses were conducted to test for differences between participants who finished the study and those who dropped out on the demographic variables biological sex, ethnicity, year in school, relationship status, and experience with mental health services. In addition, independent samples *t*-tests were conducted to check for differences between participants who finished the study and those who dropped out on the continuous variables measured at time 1 in this study. The chi square analysis showed no significant differences ($p > .05$) between those who dropped out and those who stayed in the study (i.e., no differential attrition) on biological sex, ethnicity, year in school, education level, or relationship status. However, participants who stayed in the study were significantly more likely to have sought help than those who dropped out, $\chi^2(1, N=636) = 3.86$, $p = .05$. In turn, the *t*-tests showed no significant differences ($p > .05$) between those who dropped out and those who stayed in the study (i.e., no differential attrition) on self-stigma, public stigma (Negative, Positive, and Sympathy), attitudes, anticipated risks, and anticipated benefits. However, there was a significant difference for the total Eat score, $t(544.76) = 2.15$, $p = .03$. Participants who dropped out after time 1 ($M = 11.64$, $SD = 8.85$) on average had higher eat scores than participants who participated in subsequent parts of the study ($M = 10.25$, $SD = 7.50$).

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Effects of these differential attrition findings will be discussed in the discussion section as potential limitations of the findings.

Pretreatment differences. To examine whether the random assignment to the treatment or control condition sufficiently randomized the sample, chi-square analyses were conducted to test for pretreatment differences between the two groups (control and treatment) on the demographic variables biological sex, ethnicity, year in school, education level, relationship status, and experience with mental health services. No significant differences ($p > .05$) emerged between the groups on biological sex, ethnicity, year in school, education level, or relationship status. However, significantly more participants reported previous use of mental health services in the control group (22.75%) than in the treatment group (13.81%), $\chi^2(1, N=486) = 6.54$, $p = .01$.

Independent samples *t*-tests were also performed comparing the control and treatment conditions to test for pretreatment differences in mean scores on the following measures: total eating attitudes, attitudes towards seeking counseling, self-stigma associated with seeking counseling, and the three subscales of the public stigma scale (Negative, Positive, and Sympathy). No significant differences ($p > .05$) between the groups were found on total eating attitudes, attitudes towards counseling, self-stigma, and the Negative and Sympathy subscales of public stigma. However, a significant difference between the two groups was found for the Public Stigma Positive Subscale, $t(465) = 2.11$, $p = .04$. Participants in the treatment group ($M = 14.59$, $SD = 3.58$) reported significantly higher positive public stigma scores than participants in the control group ($M = 13.87$, $SD = 3.83$). These pretreatment differences are surprising given the randomization methods used in assigning participants to groups. To control for these differences, positive public

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stigma as well as previous use of mental health services were included as covariates in the repeated measures Analysis of Co-Variance (ANCOVA) used to analyze changes in mean scores over time.

Changes in mean scores over time from pretest to posttest. This study is an experimental pretest-posttest control group design. Participants assigned to the treatment condition were asked to attend a performance on eating disorders and participants assigned to the control condition received no treatment. One-way repeated measures ANCOVAs were used to compare mean scores among groups at pretest, posttest, and follow-up. Time (pre-test vs. post-test or post-test vs. follow-up) was entered as the repeated factor and condition (treatment vs. control) was entered as the between subjects factor in each analysis. Scores on the EAT-26, Public Stigma Positive scale scores, and previous use of mental health services were controlled for in each ANCOVA.

Attitudes. It was hypothesized that people who attended the performance (treatment group) would experience a greater improvement in attitudes towards seeking help than those in the control group. Thus, we expected to find an interaction between time (pre-test vs. post-test or pre-test vs. follow-up) and group (treatment vs. control). This hypothesis was not supported as there was no significant interaction between time and group. Between time 1 and 2, a significant two-way time by previous use of mental health services interaction was detected, $F(1, 393) = 6.28$, $p = .01$, *partial* $eta^2 = .02$. Subsequent tests of simple main effects were conducted and no significant results were found (see Table 8). Thus, while the interaction between time and previous use of mental health services was statistically significant ($p = .01$), the effect size was small (*partial* $eta^2 = .02$) and the simple main effects were not significant, suggesting the interaction is

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trivial. However, the ANCOVA did show a main effect for previous use of mental health services such that attitudes were significantly higher at time 2 for people who had sought had sought mental health services (M = 28.01, SD = 6.73) than those who had not (M = 23.95, SD = 5.91), regardless of treatment or time, $F(1,393) = 13.19$, $p < .001$, *partial* $eta^2 = .03$. A significant main effect for biological sex was also detected in the ANCOVA indicating that females reported significantly higher attitude scores than males, regardless of treatment or time, $F(1,393) = 14.41$, $p < .001$, *partial* $eta^2 = .04$.

Self-stigma. It was hypothesized that attending 'The Thin Line' performance would significantly improve participant's self-stigma related to seeking help for an eating disorder. We expected to find an interaction between time and group. The hypothesis was not supported as there was no significant interaction between time and group, thus the treatment did not have a significant effect on self-stigma associated with seeking help for an eating disorder. Instead, a significant main effect for previous use of mental health services was detected at time 2 indicating that people who had sought previous mental health services reported significantly lower self-stigma than those who had not, regardless of treatment or time, $F(1, 414) = 4.61$, $p = .03$, *partial* $eta^2 = .01$.

Public stigma. It was hypothesized that attending 'The Thin Line' performance would significantly decrease participants' Negative public stigma, increase their Positive public stigma, and reduce their feelings of Sympathy for someone seeking help for an eating disorder. Thus, we expected an interaction between time and group for the Negative, Positive, and Sympathy public stigma subscales. For Negative public stigma, the two-way interaction between time and group was not significant, but a significant three-way interaction between time, group, and biological sex was detected from time 1

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to 2, $F(1, 423) = 4.76$, $p = .03$, *partial eta*^{2} = .01. However, subsequent tests of simple main effects were conducted and no significant results were found (see Table 8). Thus, while the interaction between time, group, and biological sex was statistically significant ($p = .03$), the effect size was small (*partial eta*^{2} = .01) and the simple main effects were not significant, suggesting the interaction is trivial. A significant main effect for biological sex was detected, $F(1, 423) = 4.33$, $p = .04$, *partial eta*^{2} = .01, indicating that females, on average, reported lower negative public stigma associated with seeking help than males.

For Positive public stigma, there was no significant time by group interaction, but there was a significant three-way time by biological sex by group interaction from time 1 to time 2, $F(1, 435) = 5.25$, $p = .02$, eta^2 = .01. However, subsequent tests of simple main effects were conducted and no significant results were found (see Table 8). Thus, while the interaction between time, group, and biological sex was statistically significant (p = .02), the effect size was small (*partial eta*^{2} = .01) and the simple main effects were not significant, suggesting the interaction is trivial. No significant results were found for the Sympathy public stigma subscale.

Anticipated risks. It was hypothesized that attending the performance would decrease the perceived anticipated risks involved with seeking help for an eating disorder, thus we expected an interaction between the time and group. However, no significant interaction was detected between groups over time, thus the hypothesis was not supported. A significant main effect for previous use of mental health services was detected. Participants who had sought previous mental health services reported fewer anticipated risks, regardless of treatment or time, than those who had not previously

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sought services, $F(1, 427) = 4.19$, $p = .04$, *partial* $eta^2 = .01$. In addition, a significant main effect for EAT scores was detected such that participants reporting more symptoms of disordered eating reported significantly more anticipated risks associated with counseling than those reporting fewer disordered eating symptoms, $F(1, 427) = 10.05$, $p < .01$, *partial* $eta^2 = .02$.

Anticipated benefits. In turn, it was hypothesized that attending the performance would improve participants' perceived benefits related to seeking help for an eating disorder, thus we expected an interaction between the time and group. No significant interaction effects between group and time were detected, thus the hypothesis was not supported. Instead, a significant main effect for previous use of mental health services was detected. Participants who had sought previous mental health services reported more anticipated benefits associated with counseling, regardless of treatment, than those who had not, $F(1, 430) = 5.85$, $p = .02$, *partial* $eta^2 = .01$. In addition, a significant main effect for biological sex was detected, $F(1, 430) = 7.14$, $p = .01$, *partial* $eta^2 = .02$, indicating that women reported higher average anticipated benefits scores than men.

Changes in mean scores over time from posttest to follow-up. Four weeks after the posttest (time 2), participants were contacted and asked to complete the survey another time. Results from analyses of changes in mean scores over time are reported below. One-way repeated measures ANCOVAs were used to compare mean scores among groups at from posttest to follow-up. Time (post-test to follow-up) was entered as the repeated factor and condition (treatment vs. control) was entered as the between subjects factor in each analysis. Scores on the EAT-26, Public Stigma Positive scale scores, and previous use of mental health services were controlled for in each ANCOVA.

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Attitudes at follow-up. At follow-up, a significant three-way time by biological sex by previous use of mental health services interaction was detected, $F(1,282) = 5$, $p = .03$, *partial eta*^{2} = .02. While this interaction was found to be significant in the ANCOVA analysis, subsequent analyses of simple main effects were not significant, suggesting that the interaction effect is trivial, especially when taking the small effect size (*partial eta*^{2} = .02) into consideration. In addition, the small sample size for males who had sought previous use of mental health services ($N = 10$) may have contributed to a significant interaction yet insignificant simple main effects. A significant two-way time by previous use of mental health services interaction was detected in the ANCOVA, $F(1, 282) = 4.70$, $p = .03$, *partial eta*^{2} = .02. But again, subsequent analysis of the simple main effects were conducted and no significant differences were found. While the interaction was statistically significant, due to the small effect size (*partial eta*^{2} = .02) the interaction is trivial (see Table 9). A significant two-way time by biological sex interaction was detected, $F(1, 282) = 3.91$, $p = .05$, *partial eta*^{2} = .01. Thus, although the interaction was found to be statistically significant, the effect size (*partial eta*^{2} = .01) is so small that the actual interaction is trivial (see Table 9). In addition, a significant main effect for previous use of mental health services was detected, $F(1, 282) = 15.32$, $p < .001$, *partial eta*^{2} = .05, indicating that people who had sought mental health services reported higher attitude scores than those who had not, regardless of treatment or time.

Self Stigma at follow-up. The two-way interaction between time and group was not significant, however a significant time by eating attitudes interaction was detected from time 2 to 3, $F(1, 288) = 11.95$, $p < .01$, *partial eta*^{2} = .04. Subsequent analyses indicated no significant differences on self-stigma between those high on eat scores

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(above 20 on the EAT-26) and those low on eat scores (below 20 on the EAT-26). In addition, a significant main effect for previous use of mental health services was detected, $F(1, 288) = 53.88$, $p = .01$, *partial eta*^{2} = .02, indicating that respondents who had sought previous mental health services reported lower self-stigma than those who had not.

Public stigma at follow-up. For Negative public stigma, the two-way interaction between time and group was not significant, however, the hypothesis was partially supported through a significant three-way interaction between time, group, and biological sex from time 2 to 3, $F(1, 299) = 7.49$, $p < .01$, *partial eta*^{2} = .02. Subsequent analyses of simple main effects were not significant, suggesting that the interaction is trivial (see Table 9). A significant interaction between positive public stigma and time was detected for the negative public stigma scale, (1, 299) = 7.68, $p < .01$, *partial eta*^{2} = .03. Subsequent analyses demonstrated a significant change in negative public stigma scores between time 2 and 3 for people lower on positive public stigma, (1, 148) = 7.38, $p < .01$, *partial eta*^{2} = .05.

For the Positive Public Stigma subscale, no significant interaction was found between time, group, and biological sex at follow-up (between time 2 to 3). For the Sympathy public stigma subscale, there was no significant time by group interaction at follow-up, however, a significant main effect was detected for biological sex, $F(1, 307) = 6.57$, $p = .01$, *partial eta*^{2} = .02, indicating that females report higher positive public stigma than males, regardless of group or time.

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Discussion

Part 1

Researchers have acknowledged the important need to better understand the specific reasons why women and men may avoid seeking help when experiencing symptoms associated with eating disorders (Meyer, 2001; Pike & Striegel-Moore, 1997; Vandereycken & Meerman, 1984) in order to design interventions that can effectively increasing the likelihood of seeking help for an eating disorder. Meeting this unmet need, the findings from this study demonstrate that both self-stigma and anticipated outcomes of seeking help play a role in one's attitudes towards seeking counseling for people at-risk for an eating disorder. This is an important step as before this study, little was known about the determinants of help-seeking attitudes among those at-risk for an eating disorder and without this knowledge a large segment of college students at need may go without assistance. Despite the fact that a considerable number of college students suffer from an eating disorder (5-15%; AABA, 1999; Kurth et al., 1995; Prouty et al., 2002; Stein, 1991), very few seek help for eating-related issues (Becker et al., 2004; Cachelin & Striegel-Moore, 2006; Cachelin et al., 2001; Striegel-Moore et al., 2000). It is important to investigate reasons why people with an eating disorder or at-risk for an eating disorder may not seek help because they can have a severe and chronic course of illness resulting in numerous psychological (e.g., depression, anxiety, alcohol and substance abuse) and medical (e.g., reproductive problems, osteoporosis, cardiovascular problems) co-morbidities (Pike & Striegel-Moore; Fairburn & Brownell, 2002).

The current findings are consistent with previous research finding that people, in general, tend to avoid counseling because of several psychological factors including self-

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stigma (Amato & Bradshaw, 1985; Ben-Porath, 2002; Deane & Todd, 1996), the anticipated outcomes of seeking help (Vogel & Wester, 2003), and the fear of public stigma (Ben-Porath, 2002; Deane & Todd, 1996). The findings are also consistent with the limited research focusing on eating issues. For example, women at risk for an eating disorder may avoid seeking help as a result of a fear of shame (i.e., self-stigma; Cachelin & Striegel-Moore), fear of being labeled (i.e., desire to avoid stigma; Cachelin & Striegel-Moore, 2006), and avoidance of seeking help from a counselor (Prouty et al., 2002).

The findings also add to the previous literature (Deane & Chamberlain, 1994; Husaini et al., 1994; Rickwood & Braithwaite, 1994; Surgenor, 1985; Tata & Leong, 1994; Vessey & Howard, 1993) by empirically demonstrating the moderating role of biological sex on several factors associated with attitudes towards seeking help. In the current study, men's attitudes were more strongly linked with self-stigma than women's. In other words, as self-stigma increased, attitudes decreased for men but not for women. Additionally, women's attitudes towards counseling are more positively affected by the anticipated benefits than men's. As anticipated benefits of seeking help increased, attitudes increased for women but not for men. Previous research suggests that men have more negative attitudes towards counseling (Deane & Chamberlain; Husaini et al., 1994; Rickwood & Braithwaite; Surgenor; Tata & Leong; Vessey & Howard) and perceive more self and public stigma associated with seeking help. Thus, the findings from this study provide some support for previous assertions by researchers that males and females may experience different social consequences related to expression of psychological issues or symptoms. While society tends to see counseling as a last resort (Angermeyer et

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al., 1999), the negative societal views of those who seek counseling seem to have a stronger influence on men than women.

With the knowledge of the role of self-stigma, anticipated risks, and anticipated benefits on attitudes towards seeking help for people with disordered eating, the results from the present study demonstrate the importance of continuing to investigate help-seeking behavior and attitude determinants for at-risk or clinical populations in order to ensure that the people who are in distress seek the help they need. Many studies of help-seeking decision have focused on non-clinical populations. Extending those findings to populations in need will clarify which factors are most important to focus on for specific issues. As such, future studies should continue to focus on eating disorder as well as other mental health concerns to examine if the same help-seeking factors are involved.

The findings from the current study can be used to design future interventions aimed at improving attitudes towards seeking help for an eating disorder. Specifically, interventions may need to be tailored to gender differences to effectively improve attitudes towards seeking help for an eating disorder. For instance, future research may want to focus on ways to make self-stigma components of an intervention more salient to men while making the anticipated benefits more salient to women. Researchers may also want to assist in this process by examining what mediating factors (i.e., societal pressures, masculine and feminine gender norms) influence the relationship between women's and men's stigma and anticipated outcomes and attitudes towards seeking counseling. Thus, additional research will be necessary in order to gain a better sense of how to tailor interventions to the differences between men's and women's attitudes towards seeking help for an eating disorder.

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Limitations and Future Directions

An important strength of this study is that it used a sample of people at-risk for an eating disorder to examine attitudes towards seeking help, thus extending previous research to an at-risk population. Future researchers should continue to focus on people at-risk for an eating disorder as well as people suffering from other mental disorders in order to continue to extend our understanding of help-seeking factors for such populations. Specifically, it is important to understand how people who suffer from eating disorders, as well as other psychological disorders, view counseling in order to design interventions aimed at ensuring they seek the help they need. Despite this strength, the main limitation of this study is the difficulty in generalizing the findings to all individuals at risk for an eating disorder. Specifically, the sample was characterized by lack of diversity in terms of ethnicity and age. Participants were from a large Midwestern university in which the majority identified as European-American (87.6%). In addition, the majority of participants reported being either freshman or sophomores in college (82.5%).

Due to the prevalence of European-Americans in the sample and the lack of diversity in age range, it is difficult to generalize the findings to different ethnic groups as well as to different age groups. Different ethnic groups may respond differently from European-Americans to the role of self-stigma, public stigma, anticipated risks, anticipated benefits, and attitudes towards seeking help. For instance, depending on their own ethnic and cultural backgrounds, they may perceive more or less stigma and anticipated outcomes associated with seeking counseling. Thus, it is important to reach a diverse sample in order to gain a better understanding of the cultural and ethnic

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differences in help-seeking. The sample size (N = 145) may also limit our ability to generalize to other areas of the US or to other cultures. In addition, participants were recruited because of their enrollment in undergraduate psychology courses. Future researchers should try to reach out to a broader, more diverse sample on college campuses as well as in the community.

Part 2

The results did not support the hypothesis that there would be a significant interaction between group and time for the measured variables self-stigma, public stigma, anticipated risks, anticipated benefits, and attitudes towards seeking help. Despite the fact that several three-way interactions between time, group, and biological sex were detected in the repeated measures ANCOVA, the simple main effects were not significant, suggesting that due to the large sample size, significant differences were detected in the ANCOVA that were actually trivial. The treatment may have had a slight effect on participants but it was not strong enough to be detected in the subsequent pairwise analyses of simple main effects. These findings suggest that the treatment may not have been powerful enough to create lasting changes in self-stigma, public stigma, anticipated risks, anticipated benefits, and attitudes towards seeking help between the different time points.

Some other interesting findings are worth noting. First, previous use of mental health services contributed to several expected effects. Specifically, having used mental health services led to higher attitude scores for people who had sought counseling in the past than for those who had not. Participants who had previously been in some type of mental health service reported significantly more anticipated benefits and fewer

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anticipated risks associated with seeking help than those who had never sought psychological help. These findings are consistent with previous research (e.g., Deane & Todd, 1996; Norcross & Prochaska, 1986), and suggest that previous experience with mental health services generally improves one's and attitudes towards mental health services as well as the anticipated outcomes associated with doing so.

Second, consistent with previous research (Andrews, Issakidis, & Carter, 2001; Deane & Chamberlain, 1994; Husaini, Moore, & Cain, 1994; McKay, Rutherford, Cacciola, et al., 1996; Rickwood & Braithwaite, 1994; Surgenor, 1985; Tata & Leong, 1994; Vessey & Howard, 1993; Wills & DePaulo, 1991), a number of significant main effects for biological sex were detected, indicating that women tend to have better attitudes and less public stigma towards seeking counseling than men. These findings confirm previous research on the differences between men and women concerning the way they view mental health services.

Limitations and Future Directions

One strength of this study is that an experimental pretest posttest control group design was employed in order to randomly assign participants to either the treatment or control group, thus enabling us to draw more causal inferences from the results than if participants were able to self-select. Another strength is that we were able to extend previous research findings to focus on seeking help for a clinical issue (disordered eating). However, there are a few important limitations to this study worthy of discussion. First, due to the percentage of European-Americans (84.5%) in the sample, it is difficult to generalize these findings to other regions in the US or to other cultures. In addition, the majority of the sample consisted of freshman or sophomores (79.9%), thus making it

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difficult to generalize to other age groups. Results may not be accurately representative of the actual US population due to the large percentage of European-American undergraduate psychology students. In addition, since the sample was not very diverse, the results may reflect help-seeking attitudes of this specific group of people rather than the general population. Future studies should attempt to incorporate participants from more varied ethnic backgrounds as well as from a broader range of age groups in order to improve generalizability of the findings.

Second, the intervention, 'The Thin Line' performance, was brief and only lasted about 30 minutes. While the length of the performance may be considered a limitation, I believed it was initially important to examine the effectiveness of brief interventions on changing attitudes towards seeking help because it is more realistic to assume that researchers could implement short interventions than day-long or week-long interventions in order to try to change the stigma, anticipated outcomes, and attitudes associated with seeking professional psychological help. On the other hand, the results of this study suggest that it may be important to study the effectiveness of more lengthy interventions on changing the factors associated with seeking help for an eating disorder. Future studies should attempt to determine the ideal length of an intervention aimed at changing the stigma, anticipated outcomes, and attitudes towards seeking professional psychological help.

Third, the intervention consisted of a performance by an actress and did not include personal stories or real people dealing with eating disorders. This element may have rendered the treatment less personally relevant and less believable to people in the audience. Based on previous findings (Angiullo et al., 1996; Drolen, 1993; Keane, 1991;

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Rousseau & DeMan, 1998), the more personally relevant the intervention, the more likely it is to lead to significant change in attitudes. Thus, future studies should attempt to incorporate stories from real people who are suffering from a mental illness and have sought mental health services. There may have also been elements of the play that were exaggerated for the purpose of entertainment that may have led people to have more negative views of eating disorders and mental health services than was intended. The possible exaggeration might explain why the negative public stigma associated with seeking help for an eating disorder actually increased over time for women, rather than decreased, as was hypothesized. Future studies should focus on interventions that are designed to be as accurate as possible in the portrayal of mental illness as well as mental health services.

Fourth, significant pretreatment differences on previous use of mental health services and Positive public stigma were also detected. Significantly more participants reported previous use of mental health services in the control group that in the treatment group. In addition, participants in the treatment group reported significantly higher scores on Positive public stigma than those in the control group. This finding is surprising since the sample was randomized before group assignment. To accommodate for this difference, previous use of mental health services and Positive public stigma were included as covariates. More concerning is the significant differential attrition detected for people higher on eating attitude scores. In particular, participants who dropped out of the study after time 1 had significantly higher eating attitude scores than those who remained in the study. Unfortunately, the effects of EAT scores on differential attrition in this study affect the validity of the study in that participants may have selectively dropped

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out who were more severe on eating attitude scores in order to avoid further examination of the problem. In addition, differential attrition was detected for people who reported that they had not sought mental health services in the past. Specifically, more people who had sought mental health services in the past completed the study. Again, this finding could threaten the internal validity of this study. If in fact participants dropped out of the study for reasons related to the content or structure of the study, the differences observed at the time of post-test may be a result of the differential attrition, rather than the effects of the treatment. In addition, while the design of this study included a control group, it did not involve anything for the control group to do. It may have been useful to have the control group watch an unrelated intervention to measure its effects on the factors found to play a role in help seeking behavior. Future studies should incorporate multiple methods of treatment in order to determine more effective ways of designing interventions to help decrease public and self-stigma as well as improve attitudes towards seeking help for a psychological problem.

Fifth, due to the fact that this study assessed a pre-existing, non-standardized, non-theoretical performance, it was not possible to control the content and material included. Researchers should begin to establish and develop standardized, theoretical, and empirically supported interventions. In addition, while this study is useful in assessing the effectiveness of a widely used, pre-existing intervention, it was not possible to design the intervention and include specific attitude change elements. Future researchers should design interventions to include the specific factors found to be significant in predicting attitudes towards seeking help for a particular at-risk or clinical population.

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Alterations to this treatment that might increase its effectiveness. It may be the case that the more personally relevant the material is to the participant, the more effective it will be. Thus, future studies may want to target a larger sample of people who are at risk for a particular disorder and tailor the intervention specifically to them. Related to this, the fact that the intervention consisted of a performance by an actress may have decreased its effectiveness. Future studies aiming to change attitudes, self-stigma, public stigma, and the anticipated risks and benefits associated with seeking help for a mental illness may want to include direct exposure to people with mental illness as well as to those who have sought counseling in the past. It may also be the case that seeing a performance or receiving a treatment just one time is not enough to have an effect. Thus, in the future, we may want to manipulate the frequency of contact with the intervention material in order to see if it increases the effectiveness of the treatment.

Conclusion

This study is the first to assess the effectiveness of 'The Thin Line' in terms of changing self-stigma, public stigma, anticipated risks, anticipated benefits, and attitudes towards seeking help for an eating disorder. While the hypotheses were not fully supported, the results contribute to an empirical assessment of an intervention widely used across the United States to educate people on eating disorders. Specifically, one of the main implications of this study it that is important to further explore the effects of attitudes, stigma, anticipated risks and anticipated benefits on help-seeking behavior by sex. Future interventions should accommodate these differences and either design separate interventions for males and females or ensure that elements that correlate with change for both males and females are included in the treatment. In addition to

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implications for future research, one practical implication of the current findings suggests that not only should future studies focus on reaching males and females, but that we should be cognizant of these sex and gender differences in our clinical work with clients. These findings may inform our work with clients and lead us to increased awareness of the sex and gender differences in client's views and feelings about counseling. Similarly, in participating in outreach activities in the community and making referrals, it is important to keep in mind that men and women may see counseling differently and may be affected differently by self-stigma, public stigma, anticipated outcomes, and attitudes. Finally, findings from this study can be applied to working with clients who are at-risk or experiencing an eating disorder in terms of better understanding how they view themselves (self-stigma) for needing counseling to treat their illness.

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Tables and Figures

Table 1

Reliability Alpha Coefficients for all scales at Time 1, Time 2, and Time 3

	Time 1 α	*Time 2* α	*Time 3* α	*Mean*
Attitudes				
1. ATSPPH	.87	.88	.87	.87
Self stigma				
2. SSOSH	.92	.93	.92	.92
Eating attitudes				
3. EAT total	.84	.84	.84	.84
Public Stigma				
4. PSOSH1	.89	.92	.92	.91
5. PSOSH2	.82	.84	.85	.84
6. PSOSH3	.86	.90	.90	.89
Anticipated Risks and Anticipated Benefits				
7. DES total	.60	.58	-	-
8. DES1	.82	.84	-	-
9. DES2	.85	.87	-	-

Note. N = 676. EAT = Eating Attitudes Test-26; SSOSH = *Self-Stigma of Seeking Help*; DES = *Disclosure Expectations Scale* (1=Risks; 2=Benefits); ATSPPH = *Attitudes Toward Seeking Professional Psychological Help*; = *Public Stigma of Seeking Help Scale* (1=Negative; 2=Positive; 3=Sympathy). DES1 (*Disclosure Expectations Scale;* Anticipated Risks) and DES2 (*Disclosure Expectations Scale;* Anticipated Benefits) were not included at Time 3.

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Table 2

Zero-order Correlations, Means, and Standard Deviations among the 5 Observed Variables

	2	3	4	5	*M*	*SD*
1. DES1	-.24**	.31***	-.34***	.03	13.03	4.10
2. DES2		-.42***	.61***	-.10	13.34	3.80
3. SSOSH			-.65***	.14	28.21	8.20
4. ATSPPH				.00	26.00	6.37
5. EAT Total					28.30	7.60

Note. N = 145. EAT = Eating Attitudes Test; SSOSH = *Self-Stigma of Seeking Help* (1=Positive; 2=Negative; 3=Sympathy); DES = *Disclosure Expectations Scale* (DES1=Risks; DES2=Benefits); ATSPPH = *Attitudes Toward Seeking Professional Psychological Help*.

*$p < .05$; **$p < .01$; ***$p < .001$

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Table 3

Summary of Multiple Regression Analysis for the Prediction of Attitudes

Step 1:

	b	SE_b	*β*	*t*
1. Anticipated Risks	-0.19	0.09	-.12	-2.03*
2. Anticipated Benefits	0.64	0.10	.38	6.17***
3. Self Stigma	-0.34	0.05	-.44	-7.03***
4. Participants' sex	1.68	1.02	.09	1.65

Step 2:

	b	SE_b	*β*	*t*
1. Anticipated Risks	-0.93	0.88	-.15	-1.06
2. Anticipated Benefits	0.38	1.11	.06	0.34
3. Self Stigma	-5.03	1.00	-.80	-5.05***
4. Participants' sex	1.68	1.02	.09	1.65
5. Sex x Risks	0.07	0.97	.01	0.07
6. Sex x Benefits	2.33	1.19	.34	1.97*
7. Sex x Stigma	2.62	1.09	.38	2.41*

Note. N = 145. F(7, 144) = 28.92, $p < .001$, $r^2 = .60$.
*$p < .05$; **$p < .01$; ***$p < .001$

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Table 4

Means and Standard Deviations among the Observed Variables

	Time 1		*Time 2*		*Time 3*	
	M	*SD*	*M*	*SD*	*M*	*SD*
Attitudes						
1. ATSPPH	25.00	6.16	24.75	6.15	24.91	6.19
Self stigma						
2. SSOSH	28.18	7.28	28.5	7.36	28.7	7.25
Eating attitudes						
3. EAT TOTAL	10.88	8.15	9.86	7.72	9.99	8.08
Public Stigma						
4. PSOSH1	13.46	4.98	13.25	5.19	13.42	5.31
5. PSOSH2	14.26	3.68	14.46	3.66	14.68	3.7
6. PSOSH3	14.59	3.87	15.13	4.07	15.69	4.23
Anticipated Risks and Anticipated Benefits						
7. DES1	12.97	3.71	12.99	3.73	-	-
8. DES2	12.75	3.50	12.67	3.58	-	-

Note. N = 676. EAT = Eating Attitudes Test-26; SSOSH = *Self-Stigma of Seeking Help* (1=Positive; 2=Negative; 3=Sympathy); DES = *Disclosure Expectations Scale* (1=Risks; 2=Benefits); ATSPPH = *Attitudes Toward Seeking Professional Psychological Help*; PSOSH = *Public Stigma of Seeking Help Scale* (1=Positive; 2=Negative; 3=Sympathy). DES1 (*Disclosure Expectations Scale;* Anticipated Risks) and DES2 (*Disclosure Expectations Scale;* Anticipated Benefits) were not included for Time 3.

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Table 5

Zero-order Correlations for the Scale Scores for Time 1

	2	3	4	5	6	7	8
1. EAT	-.02	.11**	.12**	.10**	.06	-.08	.04
2. SSOSH		-.70***	.42***	-.46***	.35***	-.39***	.08
3. ATSPPH			-.35***	.60***	-.21***	.26***	-.03
4. DES1				-.21***	.18***	-.22***	.04
5. DES2					-.12**	.19***	.06
6. PSOSH1						-.55***	.30***
7. PSOSH2							-.03
8. PSOSH3							

Note. N = 637. EAT = *Eating Attitudes Test-26*; ATSPPH = *Attitudes Toward Seeking Professional Psychological Help;* SSOSH = *Self Stigma of Seeking Help*; PSOSH = *Public Stigma of Seeking Help* (PSOSH1 = Negative Subscale; PSOSH2 = Positive Subscale; PSOSH3 = Sympathy subscale.
* $p < .05$; ** $p < .01$; *** $p < .001$

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Table 6

Zero-order Correlations for the Overall Scale Scores for Time 2

	2	3	4	5	6	7	8
1. EAT	-.02	.10*	.14**	.06	.03	-.06	.03
2. SSOSH		-.70***	.50***	-.44***	.36***	-.44***	.10*
3. ATSPPH			-.39***	.62***	-.24***	.32***	-.01
4. DES1				-.28***	.30***	-.25***	.12**
5. DES2					-.06	.22***	.10*
6. PSOSH1						-.56***	.29***
7. PSOSH2							-.10*
8. PSOSH3							

Note. N = 517. EAT = *Eating Attitudes Test-26*; ATSPPH = *Attitudes Toward Seeking Professional Psychological Help;* SSOSH = *Self Stigma of Seeking Help*; PSOSH = *Public Stigma of Seeking Help* (PSOSH1 = Negative Subscale; PSOSH2 = Positive Subscale; PSOSH3 = Sympathy subscale.
* $p < .05$; ** $p < .01$; *** $p < .001$

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Table 7

Zero-order Correlations for the Overall Scale Scores for Time 3

	2	3	4	5	6
1. EAT	.05	.03	.13*	-.04	.10
2. SSOSH		-.70***	.36***	-.38***	.10*
3. ATSPPH			-.21***	.29***	.02
4. PSOSH1				-.48***	.22***
5. PSOSH2					.05
6. PSOSH3					

Note. N = 385. EAT = *Eating Attitudes Test-26*; ATSPPH = *Attitudes Toward Seeking Professional Psychological Help;* SSOSH = *Self Stigma of Seeking Help*; PSOSH = *Public Stigma of Seeking Help* (PSOSH1 = Negative Subscale; PSOSH2 = Positive Subscale; PSOSH3 = Sympathy subscale. Correlations for the Disclosure Expectations Subscales (DES; Anticipated Risks and Anticipated Benefits) are not reported in this table because data was not collected for this measure at time 3.
* $p < .05$; ** $p < .01$; *** $p < .001$

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Table 8

Interaction Scores from Time 1 to Time 2

		Time 1		*Time 2*			*Time 2-*
		M	*SD*	*M*	*SD*	*N*	*Time 1*
Attitudes							
Time by Previous Mental Health Services							
1.	Yes- Previous Services	27.30	6.95	28.01	6.73	71	.71
2.	No – Previous Services	23.89	5.68	23.95	5.91	330	.06
PSOSH1 - Negative Public Stigma							
Time by Biological Sex by Group							
3.	Female, Control Group	13.68	5.32	12.84	4.93	125	-.84
4.	Female, Treatment Group	12.60	4.59	13.02	5.36	151	.42
5.	Male, Control Group	14.12	5.74	13.97	5.56	66	-.15
6.	Male, Treatment Group	13.67	4.98	12.99	4.72	90	-.68
PSOSH2 - Positive Public Stigma							
Time by Biological Sex by Group							
7.	Female, Control Group	13.60	4.06	14.22	3.89	121	.62
8.	Female, Treatment Group	14.76	3.61	14.84	3.51	153	.08
9.	Male, Control Group	14.45	3.17	14.23	3.60	73	-.22
10.	Male, Treatment Group	14.00	3.47	14.47	3.76	94	.47

Note. ATSPPH = *Attitudes Toward Seeking Professional Psychological Help*; *Public Stigma of Seeking Help Scale* (1=Negative; 2=Positive).

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Table 9

Interaction Scores from Time 2 to Time 3

		Time 2		Time 3			Time 3-
		M	*SD*	*M*	*SD*	*N*	Time 2
Attitudes							
Time by Previous Mental Health Services							
1.	Yes- Previous Services	28.35	6.48	27.57	6.97	46	-.78
2.	No – Previous Services	24.17	5.85	24.00	6.03	24 4	-.17
Time by Biological Sex							
3.	Males	22.74	6.00	22.46	6.03	112	-.28
4.	Females	26.15	5.87	25.89	6.13	178	-.26
Time by Biological Sex by Previous Mental Health Services							
5.	Yes, Males	29.80	6.88	27.20	7.30	10	-2.6
6.	No, Males	22.05	5.46	22.00	5.73	102	-.05
7.	Yes, Females	27.94	6.41	27.67	6.98	36	-.27
8.	No, Females	25.70	5.66	25.44	5.84	142	-.26
PSOSH1 - Negative Public Stigma							
Time by Biological Sex by Group							
9.	Female, Control Group	12.63	4.99	13.10	5.05	93	.47
10.	Female, Treatment Group	13.02	5.58	12.91	5.49	96	-.11
11.	Male, Control Group	14.56	5.79	13.80	5.14	50	-.76
12.	Male, Treatment Group	12.74	4.58	13.54	5.07	68	.80

Note. ATSPPH = *Attitudes Toward Seeking Professional Psychological Help*; *Public Stigma of Seeking Help Scale* (1=Negative).

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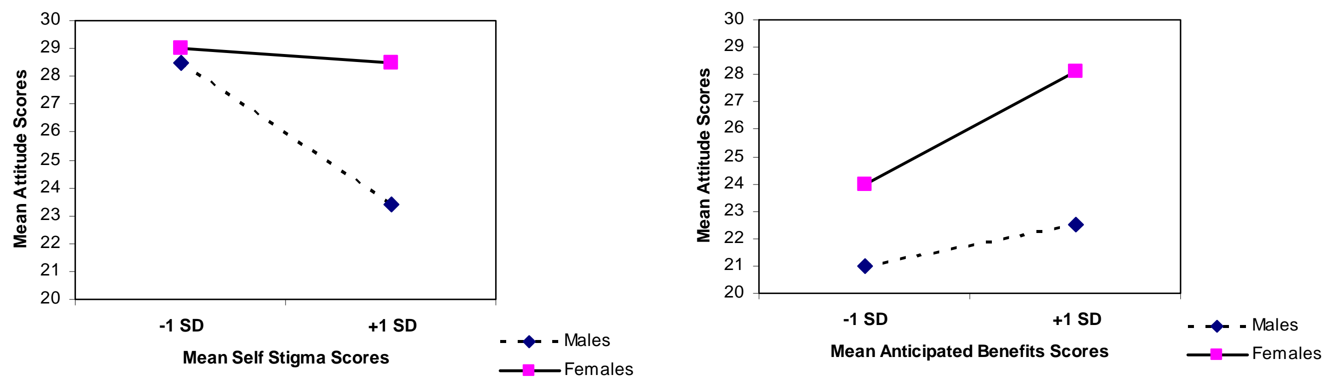
Figure 1

Interaction of Biological Sex and Self Stigma on Attitudes and Anticipated Benefits



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Appendix A

Demographic Questions

Please fill in the blank or circle the response that best answers the following questions.

1. Age ____________

2. Gender
   a. Male
   b. Female

3. Ethnicity
   a. Caucasian
   b. African American
   c. Asian American
   d. Hispanic
   e. Native American
   f. International
   g. Bi-racial
   h. Other

4. If you are still in college, what year are you?
   a. Freshman
   b. Sophomore
   c. Junior
   d. Senior
   e. Other

5. Relationship Status
   a. Single, never married
   b. In a relationship but not married
   c. Married
   d. Divorced
   e. Widowed
   f. Other

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6. If you are in a relationship, how long have you been in the relationship?
    a. Less than 6 months
    b. 6 months – 1 year
    c. 1-2 years
    d. 3-5 years
    e. 6-10 years
    f. Greater than 10 years
7. Have you ever sought mental health services for a problem in the past?
    a. Yes
    b. No
8. Have you ever sought mental health services for an eating disorder or issues with eating?
    a. Yes
    b. No
9. Are you currently receiving mental health services?
    a. Yes
    b. No
10. If you haven't sought mental health services, have you ever considered seeking mental health services?
    a. Yes
    b. No
11. Did you go to the drama "The Thin Line" on February 28th performed by actress Rose Solomon?*
    a. Yes
    b. No

*This question was asked at time points 2 and 3 only.

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Appendix B

Eating Attitudes Test -26 (EAT-26)

(Garner, Olmsted, Bohr, & Garfinkel, 1982)

Please read each statement below and indicate how often each item applies to you. In doing so, use the following options:

A= Always; B= Usually; C= Often; D= Sometimes; E= Rarely; F= Never

1. Am terrified about being overweight.
2. Avoid eating when I am hungry.
3. Find myself preoccupied with food.
4. Have gone on eating binges where I feel that I may not be able to stop.
5. Cut my food into small pieces.
6. Aware of the calorie content of the foods that I eat.
7. Particularly avoid food with high carbohydrate content (i.e. bread, rice, potatoes)
8. Feel that others would prefer I ate more.
9. Vomit after I have eaten.
10. Feel extremely guilty after eating.
11. Am preoccupied with a desire to be thinner.
12. Think about burning up calories when I exercise.
13. Other people think that I am too thin.
14. Am preoccupied with the thought of having fat on my body.
15. Take longer than others to eat my meals.
16. Avoid foods with sugar in them.
17. Eat diet foods.
18. Feel that food controls my life.
19. Display self-control around food.
20. Feel that others pressure me to eat.
21. Give too much time and thought to food.
22. Feel uncomfortable after eating sweets.
23. Engage in dieting behavior.
24. Like my stomach to be empty.

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25. Have the impulse to vomit after meals.
26. Enjoy trying new rich foods.

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Appendix C

Self-Stigma of Seeking Help (SSOSH)

(Vogel, Wade, & Haake, 2005)

Imagine you were experiencing an eating disorder. If you were to consider seeking help for this issue, how would you feel? Please respond to the following questions using the 5-point scale provided, regarding how you feel about needing psychological help for an eating disorder.

1=Strongly Disagree 2=Disagree 3=Agree & Disagree Equally
4=Agree 5=Strongly Agree

1. I would feel inadequate if I went to a therapist for psychological help.
2. My self-confidence would NOT be threatened if I sought professional help.
3. Seeking psychological help would make me feel less intelligent.
4. My self-esteem would increase if I talked to a therapist.
5. My view of myself would not change just because I made the choice to see a therapist.
6. It would make me feel inferior to ask a therapist for help.
7. I would feel okay about myself if I made the choice to seek professional help.
8. If I went to a therapist, I would be less satisfied with myself.
9. My self-confidence would remain the same if I sought professional help for a problem I could not solve.
10. I would feel worse about myself if I could not solve my own problems.

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Appendix D

Public Stigma of Seeking Help (PSOSH)

(O'Neil, Helms, Gable, David, & Wrightsman, 1986)

Imagine you had an eating disorder that needed to be treated by a mental health professional. If you sought mental heath services, to what degree do you believe that the people you interact with would ______.

1 = Not at all 2 = A little 3 = Some 4 = A lot 5 = A great deal

1. React negatively to you
2. Feel sympathy for you
3. Think bad things of you
4. Believe you were intelligent
5. See you as seriously disturbed
6. Think of you in a less favorable way
7. Be scared of you
8. React positively towards you
9. Think you posed a risk to others
10. Feel pity for you
11. Feel sorry for you
12. Feel concern for you
13. Think you were crazy
14. Want to socialize with you
15. Think that you can take care of yourself
16. Worry about you
17. Think of you in a positive way

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Appendix E

Attitudes Toward Seeking Professional Psychological Help (ATSPPHS)

(Fischer & Farina, 1995)

To what extent do you agree or disagree with the statements below:

1= Disagree; 2= Partly Disagree; 3= Partly Agree; 4= Agree

1. If I believed I was having a mental breakdown, my first inclination would be to get professional attention.
2. The idea of talking about problems with a psychologist strikes me as a poor way to get rid of emotional conflicts.
3. If I were experiencing a serious emotional crisis at this point in my life, I could find relief in psychotherapy.
4. There is something admirable in the attitude of a person who is willing to cope with his or her conflicts and fears without resorting to professional help.
5. I would want to get psychological help if I were worried or upset for a long period of time.
6. I might want to have psychological counseling in the future.
7. A person with an emotional problem is not likely to solve it alone; he or she *is* likely to solve it with professional help.
8. Considering the time and expense involved in psychotherapy, it would have doubtful value for a person like me.
9. A person should work out his or her own problems; getting psychological counseling would be a last resort.
10. Personal and emotional troubles, like many things, tend to work out by themselves.

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Appendix F

Disclosure Expectations Scale (DES)

(Vogel & Wester, 2003)

Please answer the following using the scale:

1 = Not at all; 2 = Slightly; 3 = Somewhat; 4 = Moderately; 5 = Very

1. How difficult would it be for you to disclose personal information to a counselor?
2. How vulnerable would you feel if you disclosed something very personal you had never told anyone before to a counselor?
3. If you were dealing with an emotional problem, how beneficial for yourself would it be to self-disclose personal information about the problem to a counselor?
4. How risky would it feel to disclose your hidden feelings to a counselor?
5. How worried about what the other person is thinking would you be if you disclosed negative emotions to a counselor?
6. How helpful would it be to self-disclose a personal problem to a counselor?
7. Would you feel better if you disclosed feelings of sadness or anxiety to a counselor?
8. How likely would you be to get a useful response if you disclosed an emotional problem you were struggling with to a counselor?

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Appendix G

Mass Testing Informed Consent

ISU IRB #1	01-039
Approved Date:	August 2, 2005
Expiration Date:	August 1, 2006
Initial by	gc

FALL 2005/SPRING 2006
MASS TESTING INFORMED CONSENT (revised 08/05)

Before participating, we would like you to read the following statement. The session supervisor will present the main points and will provide you with a copy of this form if you request one.

This research project is being conducted by the Iowa State University Psychology Department. If you are under 18 years of age, you are not eligible to participate unless you have already submitted a signed written parental consent form to the course information office, as already explained to you by your course instructor. If you are under 18 and have not yet obtained written parental consent, please tell the session supervisor so you can be informed about procedures necessary to become eligible for earning research credit in experiments or otherwise.

Sometimes in Psychology research, it is necessary to select participants based on certain criteria. The purpose of this session is to gather information on a number of different criteria that will help researchers know whom to contact for their specific projects.

If you decide to participate in this mass testing session there may be no direct benefit to you other than the opportunity to learn from a participant's perspective about current psychology research projects. It is hoped that information gained from this session will benefit society by selecting the appropriate study population for future studies, and thus produce scientifically valid results. By participating in this session you may be eligible for participation in future research. This session is expected to last between 60 and 90 minutes, and you will receive **two research credits** for your participation. If you are eligible for future research, the researchers will contact you, and you may decide at that time if you wish to participate in a project. Because researchers need to be able to contact you, you will be asked for your name, e-mail address, and phone number.

Several researchers have developed the questionnaires and ratings posed during this testing session. Your responses will be assembled in an electronic data file that pairs your responses with your name and student identification number. However, only the research investigators with current IRB approved research studies for mass testing will have access to your responses. The data will be stored in a locked facility and will not be stored with the codebook. Moreover, all information collected will be kept confidential to the extent permitted by applicable laws and regulations, and will be available only for use by psychology department researchers in approved projects. However, federal government regulatory agencies, including the IRB, may inspect and/or copy records for quality assurance and data analysis.

By choosing to complete this signed consent form, you are indicating your voluntary participation in this project. We do not anticipate any risk from participation in this mass-testing session. However, some of the questions may be sensitive in nature, and you may feel uncomfortable in responding to them. You may skip any questions you are not comfortable answering or decline to participate at any time without receiving any penalty or loss of benefits to which you are otherwise entitled. If you have any questions, please raise your hand or see the session supervisor. You may also contact the following persons with any questions you have about this research session:

Dr. Meifen Wei, Chair of the Psychology Department Research Participation Pool Committee (294-7534), Office Lagomarcino Hall W 214, Psychology Department, wei@iastate.edu or Dr. Norman Scott, Chair of the Psychology Department Human Participants In Research Committee (294-1509), Office W 271 Lagomarcino Hall, nascott@iastate.edu. If you have any questions about the rights of research subjects or research-related injury, please contact Ginny Austin Eason, IRB Administrator, (515) 294-4566, 1138 Pearson Hall, austingr@iastate.edu, or Diane Ament, Research Compliance Officer (515) 294-3115, dament@iastate.edu.

I have read and understood the information presented on this sheet. I have had the opportunity to ask questions about this research activity and my questions have been satisfactorily answered.

By signing my name below I agree to voluntarily participate in this mass testing session.

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Appendix H

Mass Testing Debriefing

ISU IRB #1	01-039
Approved Date:	August 2, 2005
Expiration Date:	August 1, 2006
Initial by	ge

MASS TESTING / SCALE VALIDATION DEBRIEFING STATEMENT

Thank you for completing the mass testing packet! Your responses to these questions are confidential, and will only be used by IRB approved researchers in the Department of Psychology. One of the uses for your responses is to select potential participants for other research projects. If you qualify for further research, you may receive a phone call or e-mail from a Psychology Department experimenter some time in the next year to invite you to participate in further research. Such participation is **completely voluntary**.

Responding to questions such as those in the mass testing questionnaires sometimes prompts people to reflect on their lives, feelings, and emotions. Such reflection is common, and may raise thoughts or concerns that you would like to discuss with someone else. In case that this happens to you, please be advised that there are a number of resources available in Ames for such discussion. Please feel free to contact any of the following psychology faculty members and/or agencies.

Dr. Meifen Wei, Chair, Psychology Department Research Participation Pool (294-7534), wei@iastate.edu, Office Lagomarcino Hall W 214

Dr. Norman Scott, Chair, Psychology Department Human Participants In Research Committee (294-1509), nascott@iastate.edu, Office W 271 Lagomarcino Hall

ISU Counseling Center (294-5056)
Third floor Student Service Building
Provides free counseling services to
ISU students

ACCESS (232-2303)
Alcoholics Anonymous (232-8642)
Planned Parenthood (292-1000)
Birthright (292-8414)

Student Health Service (294-5801)

If you have any questions about the rights of research subjects or research-related injury, please contact Ginny Austin Eason, IRB Administrator, 1138 Pearson, (515) 294-4566, austingr@iastate.edu, or Diane Ament, Research Compliance Officer (515) 294-3115, dament@iastate.edu.

If you would like to have a copy of this debriefing statement, please ask the session supervisor and one will be provided.

(Document revised 07/05)

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Appendix I

Informed Consent – Online Version

This is a research study. Please take your time in deciding if you would like to participate. Please feel free to ask questions at any time.

INTRODUCTION

The purpose of this study is to investigate eating attitudes and help-seeking behavior.

DESCRIPTION OF PROCEDURES

If you agree to participate in this study, your participation will last for approximately 20-30 minutes. During the study, you will be asked to answer some self-report questions through an online survey.

RISKS

We do not anticipate that these procedures will cause you any harm, but if you experience discomfort you may talk to the investigators about your concerns. You are free to skip any question that you do not wish to answer or that makes you feel uncomfortable. You are also free at any time to choose to end your participation. There will be no negative effects if you choose to skip a question or discontinue your participation in the study. If you choose to end your participation all data collected will be erased.

BENEFITS AND COMPENSATION

There is no direct benefit to you other than learning about psychological research from a participant's perspective. Your participation in this project will help the researchers develop a better understanding of how eating attitudes affect help-seeking behavior. This increased understanding may lead to creation of interventions raising awareness of help-seeking behavior and its use.

PARTICIPANT RIGHTS

Your participation in this study is voluntary and you may refuse to participate or leave the study at any time. If you decide to not participate in the study or leave the study early, it will not result in any penalty or loss of benefits to which you are otherwise entitled.

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CONFIDENTIALITY:

Records identifying participants will be kept confidential to the extent permitted by applicable laws and regulations and will not be made publicly available. In addition, precautions will be taken to protect your privacy including: (a) assigning you a unique code number that will be used instead of your name; (b) combining your data with the data collected from other participants so that no individual information will be identifiable.

Federal government regulatory agencies such as the National Institute of Health and the Institutional Review Board (a committee that reviews and approves human subject research studies) may inspect and/or copy our records for quality assurance and data analysis. These records may contain private information.

QUESTIONS OR PROBLEMS

You are encouraged to ask questions at any time during this study. For further information about the study contact, the principal investigator, Ashley H. Hackler, B.A. at vogelab@iastate.edu. The Major Professor, Dr. David Vogel, can be contacted at dvogel@iastate.edu or 294-1582. If you have any questions about the rights of research subjects or research-related injury, please contact Ginny Austin Eason, IRB Administrator, (515) 294-4566, austingr@iastate.edu, or Diane Ament, Director, Office of Research Assurances (515) 294-3115, dament@iastate.edu.

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Do you agree to participate in this study? If you click "yes", you will continue to the survey questions. If you select "No," you will exit the survey.

a) Yes
b) No

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Appendix J

Informed Consent – Written Version

This is a research study. Please take your time in deciding if you would like to participate. Please feel free to ask questions at any time.

INTRODUCTION

The purpose of this study is to investigate eating attitudes and help-seeking behavior.

DESCRIPTION OF PROCEDURES

If you agree to participate in this study, your participation will last for approximately 20-30 minutes. During the study, you will be asked to answer some self-report questions through an online survey.

RISKS

We do not anticipate that these procedures will cause you any harm, but if you experience discomfort you may talk to the investigators about your concerns. You are free to skip any question that you do not wish to answer or that makes you feel uncomfortable. You are also free at any time to choose to end your participation. There will be no negative effects if you choose to skip a question or discontinue your participation in the study. If you choose to end your participation all data collected will be erased.

BENEFITS AND COMPENSATION

There is no direct benefit to you other than learning about psychological research from a participant's perspective. Your participation in this project will help the researchers develop a better understanding of how eating attitudes affect help-seeking behavior. This increased understanding may lead to creation of interventions raising awareness of help-seeking behavior and its use.

PARTICIPANT RIGHTS

Your participation in this study is voluntary and you may refuse to participate or leave the study at any time. If you decide to not participate in the study or leave the study early, it will not result in any penalty or loss of benefits to which you are otherwise entitled.

CONFIDENTIALITY:

Records identifying participants will be kept confidential to the extent permitted by applicable laws and regulations and will not be made publicly available. In addition,

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precautions will be taken to protect your privacy including: (a) assigning you a unique code number that will be used instead of your name; (b) combining your data with the data collected from other participants so that no individual information will be identifiable.

Federal government regulatory agencies such as the National Institute of Health and the Institutional Review Board (a committee that reviews and approves human subject research studies) may inspect and/or copy our records for quality assurance and data analysis. These records may contain private information.

QUESTIONS OR PROBLEMS

You are encouraged to ask questions at any time during this study. For further information about the study contact, the principal investigator, Ashley H. Hackler, B.A. at vogelab@iastate.edu. The Major Professor, Dr. David Vogel, can be contacted at dvogel@iastate.edu or 294-1582. If you have any questions about the rights of research subjects or research-related injury, please contact Ginny Austin Eason, IRB Administrator, (515) 294-4566, austingr@iastate.edu, or Diane Ament, Director, Office of Research Assurances (515) 294-3115, dament@iastate.edu.

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SUBJECT SIGNATURE

Your signature indicates that you voluntarily agree to participate in this study, that the study has been explained to you, that you have been given the time to read the document and that your questions have been satisfactorily answered. You will receive a copy of the signed and dated written informed consent prior to your participation in the study.

Subject's Name (printed) ____

______________________________ ______________________

(Subject's Signature) (Date)

INVESTIGATOR STATEMENT

I certify that the participant has been given adequate time to read and learn about the study and all of their questions have been answered. It is my opinion that the participant understands the purpose, risks, benefits and the procedures that will be followed in this study and has voluntarily agreed to participate.

______________________________ ______________________

(Signature of Person Obtaining Informed Consent) (Date)

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Appendix K

Debriefing Statement

Thank you for your participation. The study you just participated in was designed to better understand the effects of eating attitudes on help-seeking behavior. Increased understanding of help-seeking behavior may lead to interventions to help raise awareness of and reduce negative perceptions of counseling. As mentioned before, all responses will be kept confidential and identifying information (i.e., names) will be removed at the end of your participation today. Your data will also be combined with the data of other participants to further ensure anonymity. These data will be kept in a locked cabinet, in a locked office.

If you have any concerns about the study you just participated in, please talk to one of the experimenters. If participation in this study raised personal concerns that you would like to discuss with a counselor, there are community resources listed below.

If you have any additional questions about this investigation you may contact the Principal Investigator: Ashley H. Hackler, B.A., at vogelab@iastate.edu. The Major Professor, Dr. David Vogel, can be contacted at dvogel@iastate.edu or 294-1582.

If you have any questions about the rights of research subjects or research-related injury, please contact Ginny Austin Eason, IRB Administrator, (515) 294-4566, austingr@iastate.edu, or Diane Ament, Director, Office of Research Assurances, 1138 Pearson Hall, (515) 294-3115, dament@iastate.edu.

Community Referrals

Student Counseling Services. 2223 Student Services Building. Ames, IA. 294-5056.
Marriage and Family Therapy Clinic. 4380 Palmer HDFS Building, Ames, IA. 294-0534.
Richmond Center. 125 South 3rd Street. Ames, IA. 232-5811.

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Appendix L

Email Communication

Subject Line: Earn up to four research credits!

Dr. Vogel's research lab is seeking undergraduate students to participate in a three part study on eating attitudes and help-seeking behavior. You will receive one research credit for participation in each part, and one bonus credit for completion of all three parts. So, you could easily earn up to four research credits! Please note that participation in any part of the study is entirely voluntary and you may stop at any point.

The first part of the study involves completion of a brief online survey. If you would like to participate, please go to the following website and take the survey. Please be sure to fill out all of your identification information so you can receive research credit for the study.

In addition, records identifying participants will be kept confidential to the extent permitted by applicable laws and regulations and will not be made publicly available.

You must be 18 years of age to participate in this study.

If you have any questions, please contact Ashley Hackler at vogelab@iastate.edu.

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Appendix M

Email Communication

Subject Line: Earn more research credit!

Thank you for participating in Part I of the eating attitudes and help-seeking behavior study. You have earned one research credit. We are contacting you with the opportunity to earn more research credit by participating in the second part of the study. To earn the second research credit, we are asking you to attend "The Thin Line," a drama regarding the impact of eating disorders taking place on Tuesday, February 28th at 1:30 and 7:00pm in the Memorial Union Sun Room. This drama is part of National Eating Disorders Awareness Week and will be performed by actress Rose Solomon (actress appearing in Law & Order, NYPD Blue and Mr. and Mrs. Smith). You only need to attend one of the performances.

If you plan to participate in this part of the study, please print out the attached Informed Consent Document, read, sign and return to our box outside Lagomarcino Hall W163 in order to get credit for the study. Again, this is a three part study. If you successfully complete all three parts, you will earn a total of four research credits.

Participation in any part of the study is entirely voluntary and you may stop at any point. In addition, records identifying participants will be kept confidential to the extent permitted by applicable laws and regulations and will not be made publicly available.

You must be 18 years of age to participate in this study.

If you have any questions, please contact Ashley Hackler at vogelab@iastate.edu.

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Appendix N

Email Communication

Subject Line: Earn more research credits!

Thank you for completing Part II of the eating attitudes and help-seeking behavior study. You have now earned two research credits. To earn two more research credits, please participate in the third part of the study. It involves completion of another brief online survey. If you would like to participate, please go to the following website and take the survey. Please be sure to fill out all of your identification information so you can receive research credit for the study.

Again, this is a three part study. If you successfully complete all three parts, you will earn a total of four research credits. Participation in any part of the study is entirely voluntary and you may stop at any point. In addition, records identifying participants will be kept confidential to the extent permitted by applicable laws and regulations and will not be made publicly available.

You must be 18 years of age to participate in this study.

If you have any questions, please contact Ashley Hackler at vogelab@iastate.edu.

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Appendix O

Email Communication

Subject Line: Reminder – Eating Attitudes Study February 28th

Thank you for agreeing to participate in Part II of the Eating Attitudes and Help-Seeking Behavior study. Please remember to attend "The Thin Line," a drama regarding the impact of eating disorders taking place on Tuesday, February 28th at 1:30 and 7:00pm in the Memorial Union Sun Room. This drama is part of National Eating Disorders Awareness Week and will be performed by actress Rose Solomon (actress appearing in Law & Order, NYPD Blue and Mr. and Mrs. Smith).

Again, this is a three part study. If you successfully complete all three parts, you will earn a total of four research credits. If you plan to participate in this part of the study, please print out the attached Informed Consent Document, read, sign and return to our box outside Lagomarcino Hall W163 in order to get credit for the study.

In addition, records identifying participants will be kept confidential to the extent permitted by applicable laws and regulations and will not be made publicly available.

If you have any questions, please contact Ashley Hackler at vogelab@iastate.edu.

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Appendix P

PSYCHOLOGY STUDY NO: #152

NOTE to students: You MUST have THIS NUMBER in order to cancel a study, so write it down NOW!!!

STUDY LOCATION: ***ONLINE STUDY***

STUDY TIME: *NA – ONLINE STUDY*

(Day, Date, Time)

CAUTION: You MUST have the above information to participate in a study. Your volunteering here is an agreement to appear. If you must cancel your appointment, call 294-1743 or go to W112 Lagomarcino at least 2 hours PRIOR to your scheduled time. You must be 18 yrs old to participate in this study.

TITLE Eating Attitudes and Help-Seeking Behavior

RESEARCHER'S NAME and Office Phone: Ashley Hackler 294-8126

****

BRIEF DESCRIPTION: **EARN RESEARCH CREDIT ONLINE!**
We are seeking undergraduate students to participate in this three part study. You will receive one research credit for participation in each part, and one bonus credit for completion of all three parts. You could earn four research credits for completion of all three parts of the study! If you would like to participate, please email vogelab@iastate.edu to request a password to the study.

Please be sure to fill out all of your identification information so can receive research credit for the study. If you have any questions, please contact Ashley Hackler at vogelab@iastate.edu.

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Appendix Q

#11

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Institutional Review Board
Office of Research Compliance
Vice Provost for Research
1138 Pearson Hall
Ames, Iowa 50011-2207
515 294-4566
FAX 515 294-4267

TO: Craig Anderson

FROM: Human Subject Research Compliance Office

PROJECT TITLE: Department of Psychology Mass Testing
RE: IRB ID No.: 01-039

APPROVAL DATE: August 2, 2005 **REVIEW DATE:** July 27, 2005

LENGTH OF APPROVAL: One year **CONTINUING REVIEW DATE: August 19, 2006**

TYPE OF APPLICATION: ☐ **New Project** ☒ **Continuing Review**

Your human subjects research project application, as indicated above, has been approved by the Iowa State University IRB #1 for recruitment of subjects not to exceed the number indicated on the application form. All research for this study must be conducted according to the proposal that was approved by the IRB. If written informed consent is required, the IRB-stamped and dated Informed Consent Document(s), approved by the IRB for this project only are attached. Please make copies from the attached "masters" for subjects to sign upon agreeing to participate. The original signed Informed Consent Document should be placed in your study files. A copy of the Informed Consent Document should be given to the subject.

The IRB must conduct **continuing review** of research at intervals appropriate to the degree of risk, but not less than once per year. Renewal is the PI's responsibility, but as a reminder, you will receive notices at least 60 days and 30 days prior to the next review. **Please note the continuing review date for your study.**

Any **modification** of this research project must be submitted to the IRB for review and approval, prior to implementation. Modifications include but are not limited to: changing the protocol or study procedures, changing investigators or sponsors (funding sources), including additional key personnel, changing the Informed Consent Document, an increase in the total number of subjects anticipated, or adding new materials (e.g., letters, advertisements, questionnaires). Any future correspondence should include the IRB identification number provided and the study title.

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SECTION III: ENVIRONMENTAL HEALTH AND SAFETY INFORMATION (EH&S)

☐ Yes ☒ No Does this project involve laboratory chemicals, human cell lines or tissue culture (primary OR immortalized), or human blood components, body fluid or tissues? If the answer is "no" is checked you will automatically move to a question regarding the involvement of human research participants in your project.

ASSURANCE

- I certify that the information provided in this application is complete and accurate and consistent with any proposal(s) submitted to external funding agencies.
- I agree to provide proper surveillance of this project to ensure that the rights and welfare of the human subject or welfare of animal subjects are protected. I will report any problems to the appropriate compliance review committee(s).
- I agree that I will not begin this project until receipt of official approval from all appropriate committee(s).
- I agree that modifications to the originally approved project will not take place without prior review and approval by the appropriate committee(s), and that all activities will be performed in accordance with all applicable federal, state, local and Iowa State University policies.

CONFLICT OF INTEREST

A conflict of interest can be defined as a set of conditions in which an investigator's or key personnel's judgment regarding a project (including human or animal subject welfare, integrity of the research) may be influenced by a secondary interest (e.g., the proposed project and/or a relationship with the sponsor). ISU's Conflict of Interest Policy requires that investigators and key personnel disclose any significant financial interests or relationships that may present an actual or potential conflict of interest. By signing this form below, you are certifying that all members of the research team, including yourself, have read and understand ISU's Conflict of Interest policy as addressed by the ISU Faculty Handbook (http://www.provost.iastate.edu/faculty .) and have made all required disclosures.

☐ Yes ☒ No Do you or any member of your research team have an actual or potential conflict of interest?
☐ Yes ☐ No If yes, have the appropriate disclosure form(s) been completed?

SIGNATURES

[redacted] 7-18-05
Signature of Principal Investigator Date

[redacted] 7/18/05
Signature of Department ~~Chair~~ Date

PLEASE NOTE: **Any changes to an approved protocol must be submitted to the appropriate committee(s) before the changes may be implemented.**

Please proceed to SECTION II.

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Appendix R

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Institutional Review Board
Office of Research Assurances
Vice Provost for Research
1138 Pearson Hall
Ames, Iowa 50011-2207
515 294-4566
FAX 515 294-4267

January 31, 2006

Ashley Hackler, BA
Psychology Department
W112 Lagomarcino Hall

Dear Ms. Hackler,

Approval date for Modification: January 30, 2006   Date for Continuing Review: January 29, 2007

The Institutional Review Board Co-Chair of Iowa State University met reviewed and approved the protocol entitled: "Eating Attitudes and Help-Seeking Behavior", on January 30, 2006 the protocol ID Number is: **06-027**. Please refer to this number in all correspondence regarding the protocol.

X **The modification of your study has been approved and the continuation review for this study is no later than January 29, 2007.** Renewal is the PI's responsibility, but as a reminder, you will receive notices at least 60 days and 30 days prior to the next review. **Please note the continuing review date for your study**.

The recruitment of subjects is not to exceed the number indicated on the application form. All research for this study must be conducted according to the proposal that was approved by the IRB. If written informed consent is required, the IRB-stamped and dated Informed Consent Document(s), approved by the IRB for this project only, are attached. Please make copies from the attached "masters" for subjects to sign upon agreeing to participate. The original signed Informed Consent Document should be placed in your study files. A copy of the Informed Consent Document should be given to the subject.

Any **modification** of this research project must be submitted to the IRB for review and approval, prior to implementation. Modifications include but are not limited to: changing the protocol or study procedures, changing investigators or sponsors (funding sources), including additional key personnel, changing the Informed Consent Document, an increase in the total number of subjects anticipated, or adding new materials (e.g., letters, advertisements, questionnaires). Any future correspondence should include the IRB identification number provided and the study title.

You must promptly report any of the following to the IRB: (1) **all serious and/or unexpected adverse experiences** involving risks to subjects or others; and (2) **any other unanticipated problems involving risks** to subjects or others.

Your research records may be audited at any time during or after the implementation of your study. Federal and University policy require that all research records be maintained for a period of three (3) years following the close of the research protocol.

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For IRB Use Only	Modification Approval Date 1/30/06 Continuing Review Approval Date Approval Expiration Date: 1/29/07	IRB JAN 26 2006

ISU HUMAN SUBJECTS CONTINUING REVIEW AND/OR MODIFICATION FORM

TYPE OF SUBMISSION: ☐ Continuing Review ☒ Modification ☐ Continuing Review and Modification

Principal Investigator: Ashley Hackler	Phone: 2404985311
Degree: B.A.	Correspondence Address: W112 Lagomarcino Hall
Department: Psychology	E-mail Address: ahackler@iastate.edu
Project Title: Eating Attitudes and Help-Seeking Behavior	
IRB ID: 06-027	Date of Last Continuing Review: review in process
IF STUDENT PROJECT	
Name of Major Professor: Dr. David Vogel	Phone: 515-294-1582
Department: Psychology	Campus Address: W149 Lagomarcino Hall
	E-mail Address: dvogel@iastate.edu

FUNDING INFORMATION:

☐ External Grant/Contract ☐ Internal Support (no specific funding source) or Internal Grant (indicate name below)	
Name of Funding Source:	OSPA Record ID on Gold Sheet:
☐ Part of Training, Center, Program Project Grant – Director:	Overall IRB ID No:

CONFLICT OF INTEREST

The proposed project or relationship with the sponsor require the disclosure of significant financial interests that present an actual or potential conflict of interest for investigators involved with this project. By signing this form, all investigators certify that they have read and understand ISU's Conflict of Interest policy as addressed by the ISU Faculty Handbook and made all disclosures required by it. (http://www.provost.iastate.edu/faculty .)

Do you or any member of your research team have a conflict of interest? ☐ Yes ☒ No
If yes, has the appropriate disclosure form been completed? ☐ Yes ☒ No

ASSURANCE

I certify that the information provided in this application is complete and accurate and consistent with proposal(s) submitted to external funding agencies. I agree to provide proper surveillance of this project to insure that the rights and welfare of the human subjects are protected. I will report any adverse reactions to the IRB for review. I agree that modifications to the originally approved project will not take place without prior review and approval by the Institutional Review Board, and that all activities will be performed in accordance with state and federal regulations and the Iowa State University Federal Wide Assurance.

Signature of Principal Investigator — Date 1/26/06

Student Projects: Faculty signature indicates that this application has been reviewed and is recommended for IRB review.

Signature of Supervising Faculty — Date 1/26/06 — IRB Approval Signature — Date 1/30/06

For IRB Use Only	EXPEDITED per 45 CFR 46.110(b) 7, Category ______, Letter ______ STUDY REMAINS EXEMPT per 45 CFR 46.101(b) ______ WAIVER of SIGNED CONSENT per 45 CFR 46.117(c) ______ WAIVER of ELEMENTS of Consent per 45 CFR 46.116 ______ VULNERABLE POPULATION per 45 CFR 46.______

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Acknowledgements

I would like to take this opportunity to express my sincere appreciation to those who helped me with various aspects of conducting research and the writing of this thesis. First and foremost, Dr. David L. Vogel for his guidance, patience and support throughout my graduate education, especially in this research study. His assistance, support, and words of encouragement often sustained me in times of frustration and helped renew my commitment to the graduate program. I would also like to thank my committee members for their efforts and contributions to this work: Dr. Nathaniel Wade and Dr. Marcia Michaels.

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