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DISORDERED EATING AND SPIRITUAL WELL-BEING IN COLLEGE-AGE
WOMEN

by

Laura M. Carter

A Dissertation Submitted in
Partial Fulfillment of the
Requirements for the Degree of
Doctor of Philosophy
in Educational Psychology
at
the University of Wisconsin-Milwaukee
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ABSTRACT

EATING DISORDERS AND SPIRITUAL WELL-BEING IN COLLEGE-AGED WOMEN

by

Laura Carter

The University of Wisconsin-Milwaukee, 2015
Under the Supervision of Professor Anthony Hains

The Theistic Model of Human Nature and Psychopathology suggests that human development and personality are influenced by biological, social, psychological, cognitive, and affective processes, but the essence of identity and personality is spiritual (Richards and Bergin, 2005). Religious/spiritual issues are often crucial components in understanding the etiology of and recovery from mental illness, including but not limited to eating disorders (Plante & Sharma, 2001; Richards, Hardman, & Berrett, 2007). There is a paucity of quantitative research, however, examining the relationships and role of spirituality and eating disorders. The present study examines the relationship between spiritual well-being and disordered eating. Upper-level psychology students in research methods courses recruited appropriate participants: 158 women ages 18-24. Surveys were posted on an online research management program. Disordered eating was measured using the Eating Attitudes Test-26 (EAT-26; Garner & Garfinkel, 1979). The EAT-26 assesses food preoccupation, eating behaviors, laxative use, and purging. Spiritual well-being was measured using the Spiritual Well-Being Scale (SWBS; Paloutzian & Ellison, 1982), a 20-item self-report instrument assessing the degree to which individuals report that experience a satisfying relationship with God or a particular religious affiliation and the sense of life satisfaction and purpose independent of religion. EAT-26 scores were

hypothesized to be significantly negatively correlated with SWBS scores; however, non-statistically significant relationship was found. This may be due to a non-clinical sample. Future research should focus on multiple factors, including but not limited to spirituality, that are related to eating disorder etiology and treatment.

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Introduction

Eating disorders

Persons with eating disorders have severe, persistent disturbances in eating behavior, body image, and weight that impacts physical health and psychosocial functioning (National Institute of Mental Health, 2013; American Psychiatric Association, 2013). The majority of people seeking treatment for an eating disorder typically received a diagnosis of *eating disorder not otherwise specified*. This vague diagnosis from the previous *Diagnostic and statistical manual of mental disorders* (4th Ed., text rev.; American Psychiatric Association, 2000) may not have adequately captured biological processes, populations of interest, and genetic and environmental risk factors. Therefore, researchers evaluated this system in order to modify diagnostic conceptualizations of eating disorders (Wonderlich, Joiner Jr., Kell, Williamson, & Crosby, 2007). In the current *Diagnostic and Statistical Manual of Mental Disorders* (5th Ed.; *DSM-5*; American Psychiatric Association, 2013), eating disorders are classified in one of several diagnostic categories: avoidant/restrictive food intake disorder, anorexia nervosa, bulimia nervosa, binge-eating disorder, other specified feeding or eating disorder, and unspecified feeding or eating disorder (American Psychiatric Association, 2013).

As described in the *DSM-5* (American Psychiatric Association, 2013), *anorexia nervosa* is comprised of the following diagnostic criteria: restrictive energy intake leading to significantly low body weight, intense fear of gaining weight or becoming fat, and body image distortion, undue influence of body weight or shape on self-evaluation, or persistent lack of recognition of the seriousness of the current low body weight.

Bulimia nervosa is defined by eating an amount of food that is definitely larger than what most individuals would eat in a similar time and under similar circumstances; and inappropriate compensatory behaviors (e.g., vomiting, fasting) that occur an average of once per week for three months; and self-concept dominated by body shape and weight. Additionally, the behavioral disturbance does not occur exclusively during episodes of anorexia nervosa. *Binge eating disorder* involves marked distress about one's recurrent episodes of binge eating in the absence of regular use of inappropriate compensatory behaviors; these episodes occur on average at least once a week for at least three months (American Psychiatric Association, 2013).

Other specified feeding or eating disorder describes symptoms that do not meet the criteria for any of the other feeding or eating disorders. These eating disorder symptoms are associated with clinically significant distress or impairment in social, occupational, or other important areas of functioning. *Unspecified feeding or eating disorder* refers to disordered eating that does not meet the criteria for any of the other feeding or eating disorders. These symptoms are also associated with clinically significant distress or impairment in social, occupational, or other important areas of functioning. This category, however, is used when the clinician elects not to indicate why the criteria for a specific diagnosis are not met. For instance, this might be due to having insufficient information for making an accurate diagnosis, such as in emergency room settings (American Psychiatric Association, 2013).

Eating disorders generally begin during adolescence and early adulthood, and often endure throughout one's life (Chavez & Insel, 2007). The onset of anorexia nervosa typically occurs in mid-to late adolescence and is often associated with a stressful life

event. The onset of bulimia nervosa usually begins in late adolescence or early adulthood (American Psychiatric Association, 2013). As early as 1973, it has been noted that eating disorders may develop after the occurrence of a precipitating event such as going away to school (Bruch, 1973).

The prevalence rate of anorexia appears higher among college students than the general population (Hudson, Hirripi, Pope, & Kessler, 2007). As many as 25% of college-aged women engage in bingeing and purging as a weight-management technique (Renfrew Center Foundation for Eating Disorders, 2003). In a survey of 185 female students on a college campus, 58% felt pressure to be a certain weight; of the 83% that dieted for weight loss, 44% were normal weight (ANAD, 2011). Another study reported that 91% of women surveyed on a college campus had attempted to control their weight through dieting; 22% dieted “often” or “always” (Shissla, Crago, & Estes, 1995).

The age and sex of female university students makes them a high-risk population, especially when they must cope with a stressful adaptation to a new environment and lifestyle (Crowther, Wolfe, & Sherwood, 1992). Brumberg (1988) detailed college freshmen’s newfound freedom to individualize the substance and timing of eating on college campuses that may facilitate eating disorder behaviors. Most colleges and surrounding communities have made provisions to satisfy student appetites at any time: cafeterias, snack bars, and vending machines. Students can typically obtain food and snacks at any time of the day. Some meal plans allow unlimited amounts of food, a policy that fuels bulimic behaviors. Students do not have the same structure and parental supervision, which could make any kind of disordered eating more feasible. Additionally,

the peer support of disordered eating may encourage such behavior (Heatherton, Nichols, & Mahamedi, 1997).

Striegel-Moore, Silberstein, & Rodin (1986) described campus eating disorders as a positive feedback loop: the more women there are with disordered eating, the most likely there are to be even more women who develop disordered eating. Gordon (2000) described this as the “socialization of bulimia”. This is not implying that being on a college campus causes eating disorders. Learning by imitation does not account for an eating disorder in its entirety; for this, one must understand the predisposing factors (e.g., physical and mental health history) that led the person to incorporate self-abusive behaviors. Rather, it merely suggests that social factors provide the model or template for the particular form that the symptomatic behavior takes.

The transition to college can be a stressful event that precipitates eating disorders. Spirituality, however, serves as a protective factor that has facilitated the adjustment to college life and its challenges (Addison, 1997; American Psychological Association, 2014; Phillips, 2000; Shaffner, 2005). Moreover, a person’s sense of spirituality may be related to her eating behavior, both factors being examined in this study.

Spirituality and eating disorders

Love and Talbot (1999) described spirituality as a process that involves the pursuit of discovering direction and purpose in one's life. Mattis (2000) argued that spirituality is complex and includes belief in a supernatural dimension of life, a personal relationship with God; living according to God's will, and holding intrinsic beliefs and values. Ross (2003) contends that spirituality is living in accordance with a set of divinely-inspired values and opposing challenges or conflicts to these values. Heath

(2006) described spirituality as a way of living, critiquing society, affirming dignity and self-worth, achieving sanity, communal solidarity, and social support; and distinguishing the oppressed from their oppressors. Spirituality relates to an aspect of people that generates motivating forces in one's life, bonds with other people and nature, a sense of self, and going beyond oneself (Gilbert, 2007). Barnes and Sered (2005) defined spirituality as an individual, sometimes irreligious experience benefitting the mind and possibly even the body.

Some argue that a distinction exists between spirituality and religion. Religion is typically associated with organized, institutional activities and provides a worldview which is acted out in narrative, doctrine, symbols, rites, and gatherings. It involves the practices and rituals of attendance in worship services, the reading of sacred texts, and affiliation with an organized church, mosque, synagogue, or temple (Mattis, 2000). Barnes and Sered (2005) explained that in the United States, the term "religion" is variously used in reference to belief in divine beings, adherence to a set of ethical or cosmological tenets, ritual practices, prayer, institutions that sponsor communal events, and/or the traditions of a community within which one celebrates holidays or life-cycle events.

Religion encompasses many aspects within the concept of spirituality, usually in the context of a belief in transcendent being(s) with a meta-narrative which seeks to explain the origins of the world and those living in it, and the questions surrounding life, suffering, death, and after-life (Gilbert, 2007). Speck (1998, p. 22)'s conceptualization of religion acknowledges an overlap between religion and spirituality; religion as a "system of faith that expresses an underlying spirituality, and faith frequently interpreted in terms

of rules, regulations, beliefs, and customs”. In sum, the terms “religion” and “spirituality” are overlapping constructs whose specific definitions remain a subject of debate. Both reflect the “feelings, thoughts, experiences, and behaviors that arise from a search for the sacred” (Hill et. al, 1998, p.21).

Although this paper cannot comprehensively account for each culture’s meaning and role of religion and spirituality, conceptualizations of spirituality reflect significant cultural influences. Jagers and Smith (1996) suggested that spirituality is a worldview that is central to certain cultural expressions. For example, African Americans typically embrace the value of religion - its liberating power, the reliance on a higher power, and the practical application of spiritual principles in life (McAdoo, 1993). European Americans often tend to view religion from a theoretical perspective. They do not necessarily place less value on spiritual matters, but may be more inclined to view spirituality from an intellectual, abstract, and highly conceptual perspective (Thistlethwaite & Engel, 1990). Interpreting and understanding the role of spirituality in the manifestation of mental health is necessary because some type of spirituality is an integral part of all sociocultural systems (Carter, 2002).

The majority of documentation describing the relationship between spirituality and eating disorders has been conceptual. Levine, Piran, and Steiner-Adair (1999) argued that eating problems are existential problems. Emmet (2007) referred to the “spiritually bankrupt souls of those afflicted with one of society’s most refractory emotional illnesses”. That is, people with eating disorders struggle a great deal with purpose and meaning in their lives as well as overall life satisfaction. Furthermore, Richards, Hardman, and Berrett (2007) conceptualized eating disorders as illnesses of the mind,

body, and spirit. Twelve-step self-help groups, such as Overeaters Anonymous (OA) and Anorexics and Bulimics Anonymous, have made a similar claim, indicating that eating disorders are physical, emotional, and spiritual diseases (Johnson & Sansone, 1993).

Hardman, Berrett, and Richards (2003) argued that eating disorders undermine a person's spiritual well-being. Furthermore, they described the deep spiritual conflicts that many women with eating disorders face: atonement/punishment, role of a higher power, shame, doubt, meaning, control, purpose, connection, love, faith, worth and forgiveness—all essential elements of spirituality. This information was based on the authors' clinical experiences working with over 350 eating disorder patients at a particular treatment center.

Religious/spiritual issues are often crucial components in understanding the etiology of, and recovery from, anorexia, bulimia and compulsive overeating (Plante & Sharma, 2001; Richards, Hardman, & Berrett, 2007). There is a paucity of research, however, particularly quantitative research, examining the relationships and role of spirituality and eating disorders. One quantitative study (Watkins, Christie, & Chally, 2006) found that spiritual well-being and especially existential well-being may be associated with the severity of binge eating. Higher levels of binge *eating* severity were associated with lower global spiritual and existential well-being scores.

Purpose of study

Barnes and Sered (2005, p.10) assert that research on and incorporation of spirituality is a “welcome correction to both institutionalized structures of organized religion and an overly mechanical biomedical focus of the physical body”. Chavez and Insel (2007) called for more studies that focus on risk factors of persons with disordered

eating. The aforementioned research on spirituality and eating disorders has only begun to address the importance of using spirituality in eating disorder treatment and recovery.

Researchers “intrigued by the mysterious bridge between wholeness and holiness” (Emmet, 2007, p.184) should investigate the potential relationship between spirituality and disordered eating. This would provide newfound insight for spiritual leaders as well as counseling professionals working with given populations. This research could also enhance developmentally informed interventions and provide recommendations to student affairs professionals on how they might provide supportive services for students at risk for eating disorders. This study will provide clarity on the role of spiritual well-being and disordered eating and address shortcomings in the existing literature by exploring the relationship between spiritual well-being and disordered eating in college-age women.

Research Questions and Hypotheses

- 1) *Is there a significant relationship between overall spiritual well-being and disordered eating?*

The relationship between participants’ spiritual well-being and disordered eating was predicted to be inversely proportional based on findings of Smith, Richards, and Maglio (2004). That is, individuals with high levels of spiritual well-being were expected to have lower levels of disordered eating than individuals with low levels of spiritual well-being.

- 2) *Is religious well-being a significant predictor of disordered eating?* Religious well-being was hypothesized to be a significant predictor of disordered eating.

3) *Is existential well-being a significant predictor of disordered eating?* Existential well-being was expected to be a significant predictor of disordered eating.

4) *Is overall spiritual well-being a significant predictor of disordered eating?* Spiritual well-being was hypothesized to be a greater predictor of disordered eating than religious well-being and existential well-being separately.

Literature Review

Americans are concerned about eating disorders. According to a national public opinion poll conducted by Global Market Insite (2005) and sponsored by the National Eating Disorders Association, the overwhelming majority of participants (96%) believe that eating disorders are serious illnesses. Almost half (42%) of the respondents either suffered from an eating disorder at one time, or knew someone who did.

A great deal of research has been devoted to the prevention, assessment, and treatment of eating disorders, which tend to afflict college women at higher levels than the general population (Hudson, Hiripi, Pope, & Kessler, 2007). Furthermore, the transition to college can be a particularly stressful time in which an individual may develop an eating disorder (Crowther, Wolfe, & Sherwood, 1992). College adjustment can be facilitated by spirituality, however. For instance, spiritual well-being has been found to be a significant predictor of social college adjustment (Schaffner, 2005). In addition, positive spiritual coping styles (e.g., prayer, meditation) enhanced college adjustment, implying that spiritual coping strategies can play an important role in psychological adjustment of new college students (D'Andrea, 2004). Spirituality has also been documented as a component in the recovery of individuals with eating disorders and has been used in interventions for eating disorders (Richards, Hardman, & Berrett, 2007). Limited research, however, exists on the relationship between role of spirituality and eating disorders in college-age women.

Eating disorders

Diagnostic issues

Eating disorders are characterized by severe, persistent disturbances in eating behavior, body image, and weight that impacts physical health and psychosocial functioning (National Institute of Mental Health, 2013; American Psychiatric Association, 2013). Prior to the *Diagnostic and Statistical Manual of Mental Disorders-5* (American Psychiatric Association, 2013), the majority of individuals seeking treatment for an eating disorder received a diagnosis of Eating Disorder Not Otherwise Specified. The previous diagnostic system, however, may not have adequately captured biological processes, populations of interest, and genetic and environmental risk factors. Therefore, the diagnostic system was reevaluated to propose other conceptualizations of eating disorder diagnoses (Wonderlich, Joiner Jr., Kell, Williamson, & Crosby, 2007).

In the current *Diagnostic and Statistical Manual of Mental Disorders (DSM-V;* American Psychiatric Association, 2013), eating disorders may be classified in one of several diagnostic categories: avoidant/restrictive food intake disorder, anorexia nervosa, bulimia nervosa, binge-eating disorder, other specified feeding or eating disorder, and unspecified feeding or eating disorder.

As noted in the *DSM-V* (American Psychiatric Association, 2013), *anorexia nervosa* comprises of the following diagnostic criteria: restrictive energy intake leading to significantly low body weight, intense fear of gaining weight or becoming fat, and body image distortion, undue influence of body weight or shape on self-evaluation, or persistent lack of recognition of the seriousness of the current low body weight. *Bulimia nervosa* is defined by eating an amount of food that is definitely larger than what most individuals would eat in a similar time and under similar circumstances; and inappropriate compensatory behaviors (e.g., vomiting, fasting) that occur an average of

once per week for three months; and self-concept dominated by body shape and weight. Additionally, self-evaluation is unduly influenced by body shape and weight, and the behavioral disturbance does not occur exclusively during episodes of anorexia nervosa. Binge eating disorder describes marked distress about one's recurrent episodes of binge eating in the absence of regular use of inappropriate compensatory behaviors; these episodes occur on average at least once a week for at least three months (American Psychiatric Association, 2013).

Other specified feeding or eating disorder and *unspecified feeding or eating disorder* do not meet the criteria for any of previously mentioned disorders. Such symptoms of these disorders cause clinically significant distress or impairment in social, occupational, or other important areas of functioning. Unlike *other specified feeding or eating disorder*, however, *unspecified feeding or eating disorder* is used when the clinician does not indicate why the criteria for a specific diagnosis are not met. This could occur in situations where a clinician has insufficient information, such as in emergency room settings (American Psychiatric Association, 2013).

Statistics

Eating disorders are some of the most troubling behavioral disorders in Western societies and rank among the top four leading causes of burden of disease in terms of years of life lost through death or disability for females ages 15-24 (Academy for Eating Disorders, 2013). Eating disorders often co-occur with other psychiatric disturbances and disorders such as depression, anxiety, obsessiveness, substance abuse, and marked impairment in social/occupational functioning. Eating disorder-related medical complications can potentially affect every system of the body and include but are not

limited to serious cardiovascular, neurological, gastrointestinal, and dental problems (American Psychiatric Association, 2013).

In the United States, anorexia nervosa's crude mortality rate (number of persons who have died from given condition) has been approximately four percent (Crow et al. 2009) or five percent per decade (American Psychiatric Association, 2013). University hospital patients with anorexia nervosa have a mortality rate over 10% (American Psychiatric Association, 2000), which is the highest rate of any psychiatric condition (Arcelus, Mitchell, Wales, & Nielsen, 2011; Birmingham, Su, Hlynsky, Goldner, & Gao, 2005; Hoek & van Hoeken, 2003; Millar et al., 2005; Sullivan, 1995; Zipfel, Lowe, Reas, Deter, & Herzog, 2000). The crude mortality rates for bulimia nervosa and eating disorders not otherwise specified were 3.9% and 5.2%, respectively (Crow et al., 2009). Death typically occurs from anorexia-related medical complications or suicide (American Psychiatric Association, 2013; Södersten, Bergh, & Zandian, 2006). Individuals with eating disorders have an increased risk for suicide (American Psychiatric Association, 2013); specifically, suicide risk for individuals with anorexia nervosa is estimated to range from twelve (Academy for Eating Disorders, 2013) to fifty (Keel, 2003) times greater than the general population.

Eating disorders have the highest level of treatment seeking and inpatient hospitalization of any psychiatric syndrome (Newman et al., 1996; Wilson, Heffernan, & Black, 1996). The average daily cost of eating disorder treatment in the United States is \$956 (Frisch, Herzog, & Franko, 2006); costs are likely to be higher presently. Individuals with eating disorders often need anywhere from three to six months of inpatient care. Because health insurance companies do not typically cover the cost of

comprehensive care, outpatient treatment, including therapy and medical monitoring, can extend to \$100,000 or more.

Prevalence

Although the exact morbidity and mortality rates of eating disorders are difficult to establish (Chavez & Insel, 2007), diagnosable eating disorders are relatively rare (Levine, 1997; Hoek, 2006). People with eating disorders, however, often attempt to hide such problems (Polivy & Herman, 2002). In any case, anorexia nervosa is likely most prevalent in post-industrialized, high-income countries such as the United States, Australia, New Zealand, Japan, and certain European countries (American Psychiatric Association, 2013). The prevalence of anorexia nervosa among Latinos, African-Americans, and Asians in the United States appears to be lower than that of European-Americans. The lifetime prevalence rate of anorexia nervosa is approximately .9% of women and .3% of men (Hudson, Hiripi, Pope, & Kessler, 2007). The twelve-month prevalence rate of anorexia in young females is approximately .4% (American Psychiatric Association, 2013).

The lifetime prevalence of bulimia nervosa is approximately .5% in women and .1% of men (Hudson, Hiripi, Pope, & Kessler, 2007). The twelve-month prevalence rate of bulimia in young females is about 1-1.5%. Bulimia nervosa occurs at approximately similar frequencies in the United States, Australia, New Zealand, Japan, South Africa, and many European countries. Although the majority of individuals in U.S. clinical studies of bulimia nervosa have been white, the prevalence of bulimia nervosa among non-white racial/ethnic groups is estimated to be similar to that of whites (American Psychiatric Association, 2013).

Binge-eating disorder is more prevalent than both anorexia nervosa and bulimia nervosa; approximately 3.5% of women and 2% percent of men reported having binge-eating disorder at some point in their lives (Hudson, Hiripi, Pope, & Kessler, 2007). The twelve-month prevalence rate of binge-eating disorder in U.S. adult (ages 18 and older) is about 1.6% for females and .8% for males. Binge-eating disorder occurs at approximately similar frequencies in most industrialized countries such as the United States, Canada, Australia, New Zealand, and many European countries. Furthermore, in the United States, the prevalence of binge-eating disorder among racial/ethnic minority females is estimated to be similar to that of white females (American Psychiatric Association, 2013).

Piran, Levine, and Steiner-Adair (1999) argue that the subthreshold components (e.g., negative body image, fear of fat, feelings of insecurity regarding one's needs) are prevalent enough among girls and women to be considered normative and "epidemic". The number of college women with body image concerns is even more prevalent. Overall, 35% to 45% of adolescent girls reported difficulties with weight control, regard themselves as too fat, or aspire to become thinner (Taylor et al, 2007).

Some researchers have examined whether eating disorders are more prevalent in certain religious groups over others, and results have varied. Garfinkel and Garner (1982) found no significant differences in eating disorder prevalence among different religious groups. Oomen (2000) found higher prevalence of disordered eating among Baptist, Catholic, and Methodist college women when compared to women who identified as Mormon or other religious affiliation not previously mentioned; atheist or agnostic-self-identified women were excluded from the study. Sykes, Gross, and Subishin (1986)

found higher prevalence of disordered eating among Catholic and Jewish women when compared to women who identified as Protestant, another religious affiliation not previously mentioned, or no religious affiliation.

Pinhas and colleagues (2008) discovered higher rates of disordered eating among adolescent Jewish girls than non-Jewish adolescent girls; they did not find, however, differences in disordered eating among Orthodox and non-Orthodox girls. Latzer, Orna, and Gefen (2007), however, found that Orthodox adolescents in Israel were less likely to experience disordered eating than their non-Orthodox counterparts. Weinberger-Litman (2007) did not find differences in disordered eating among Orthodox and non-Orthodox Jewish college women.

The challenge of measuring prevalence is due to reluctance of reporting, narrow diagnostic criteria, and the majority of individuals not seeking treatment. Mental health service utilization among racial minorities with eating disorders is lower than that of European-Americans which may confound the true prevalence rate of eating disorders among racial minorities in the United States (American Psychiatric Association, 2013). In a study on eating disorder prevalence rates, more than 50 percent of individuals with eating disorders reported receiving treatment for emotional problems at some point in their lives, but less than 45 percent sought treatment specific to their eating disorder. When seeking treatment, they most commonly went to the general medical sector rather than to specialized care (Hudson, Hiripi, Pope, & Kessler, 2007). The devastating psychological, social, physical, and financial consequences of eating disorders warrant research on its prevention and treatment.

Onset

Eating disorders generally occur during adolescence and early adulthood and often endure throughout life (Chavez & Insel, 2007; Brumberg, 2000; Keel & Klump, 2003). The onset of anorexia nervosa typically begins in mid-to late adolescence and is often associated with a stressful life event such as leaving home for college (American Psychiatric Association, 2013). According to Hudson, Hiripi, Pope, and Kessler (2007), the average age of onset for anorexia is 19 years old. The onset of bulimia nervosa usually begins in adolescence or young adulthood (American Psychiatric Association, 2013), with average age of onset being 20 years old (Hudson, Hiripi, Pope, & Kessler, 2007). Binge eating disorder usually begins in adolescence or young adulthood (American Psychiatric Association, 2013), with the average age of onset of binge eating disorder being 25 years old (Hudson, Hiripi, Pope, & Kessler (2007).

Risk factors

Field (2004) noted methodological issues regarding the identification of eating disorder risk factors, correlates, and confounding variables. A true risk factor is a characteristic, experience, or event that predicts the outcome of interest. A correlate is associated with the outcome but not necessarily a predictor of it; this important distinction is not always noted. A confounder is a factor associated with both the true risk factor and the outcome. In order to infer causality, the association between the risk factor and outcome must not be due to confounding influences. This cannot be achieved in one study alone.

Eating disorders are fundamentally biopsychosocial illnesses (Keel, Baxter, Heatherton, & Joiner, 2007). Striegel-Moore and Bulik (2007) reviewed multidisciplinary literature to find a variety of biological and environmental eating disorder risk factors:

gender, ethnicity, genetics, media and peer socialization, personality characteristics, and co-morbid psychiatric disorders such depression and obsessive-compulsive disorder.

The single best predictor of risk for developing an eating disorder is being female. The Western ideal of thin body size is primarily targeted at females via media. White race/ethnicity may be a marker for eating disorders as is higher socioeconomic status (Striegel-Moore & Bulik, 2007). Kessler and colleagues (2005), however, warn about the assumptions and applicability of eating disorder research findings due to the overrepresentation of White female samples.

Van Boven and Esplage (2006)'s study supported previous findings (Souckup, Beiler, & Terrell, 1990; Troop, Holbrey, Trowler, & Treasure, 1994) that certain coping strategies are risk factors; women with clinically diagnosed eating disorders reported using more avoidance coping than women without eating disorders.

Garfinkel and Garner (1982) summarized a number of studies that described precipitants of eating disorders. Separation and losses, including events involving the person leaving home and new environmental demands, are common examples. The individual perceives personal distress in the form of a threat of loss of self-control, threat or actual loss of self-worth, and fear of failure.

As early as 1973, it has been noted that eating disorders may develop after the occurrence of a precipitating event such as going away to school (Bruch, 1973). The prevalence rate of anorexia nervosa seems to be higher among college students than the general population (Hudson, Hiripi, Pope, & Kessler, 2007). The age and sex of female university students makes them a high-risk population, especially when they must cope

with a stressful adaptation to a new environment and lifestyle (Crowther, Wolfe, & Sherwood, 1992).

Brumberg (1988) anecdotally details college freshmen's newfound freedom to individualize the substance and timing of eating on college campuses that may facilitate eating disorder behaviors. Most colleges and surrounding communities have made provisions to satisfy student appetites at any time: cafeterias, snack bars, vending machines, and restaurants. Students can typically obtain food and snacks at any time of the day. Some meal plans allow unlimited amounts, a policy that may contribute to bulimic behaviors. Students do not always have the same structure and parental supervision, which could make any kind of disordered eating more feasible. Zakar (1998) recalls, "College life—or maybe just my age, made me vulnerable. At home kids still have social and religious constraints of the family and community to keep things in balance. At college, these disappear; for many, there are no real external checks and balances." Additionally, the peer support of disordered eating may facilitate such behavior (Heatherton, Nichols, & Mahamedi, 1997).

The aforementioned information does not imply that being on a college campus *causes* eating disorders. Striegel-Moore, Silberstein, and Rodin (1986) described eating disorders on campus as a positive feedback loop: college women who are exposed to their peers with disordered eating are more likely to develop disordered eating. Gordon (2000) described this as the "socialization of bulimia". Learning by imitation does not account for the clinical eating disorder in its entirety; for this, one must understand the predisposing factors (e.g., physical and mental health history) that led the person to incorporate self-abusive behaviors. Moreover, it merely suggests that social factors

provide the model or template for the particular form that the symptomatic behavior takes.

Striegel-Moore and Bulik (2007) outline the importance of identifying risk factors for eating disorders to assist with the identification of causal mechanisms to understand why certain people develop the problem in question. Furthermore, eating disorder classification (i.e., diagnoses) should ideally be based on etiology. Risk-factor studies present unexamined sources of information for revision of the current diagnostic system. An additional argument to identify risk factors is that it informs prevention programs, treatment practices, and public policy.

Prevention

A primary philosophical emphasis throughout the history of counseling has been on preventing psychological distress by building on strengths and healthy development (Gladding & Newsome, 2004). *Prevention* however, is somewhat ambiguous to define, although Caplan (1964) differentiated three different types of prevention: primary, secondary, and tertiary. Primary prevention refers to the efforts that attempt to reduce the number of new occurrences of a disorder. Its goal is to keep healthy people healthy by increasing environmental resources or strengthening personal competencies. Secondary prevention is targeted toward people at risk of developing a problem or who are exhibiting early signs of a disorder. The goal is to work with these individuals to forestall or alleviate problems before they intensify. Tertiary prevention is comprised of the efforts aimed at reducing the debilitating effects of an existing disorder; it is also conceptualized as treatment or remediation.

A great deal of research has been devoted to the prevention of eating disorders. Stice and Hoffman (2004) reviewed 41 prevention programs. Overall, the positive effects of the programs were as follows: 22 (67%) of the programs resulted in significant reductions of at least one established risk factor for eating pathology, and 6 (18%) resulted in significant reductions in eating pathology. Targeted (secondary) prevention programs were found to be more effective than universal (primary) prevention in reduction of eating pathology and risk factors for eating pathology. Didactic interventions produced fewer positive effects than interactive interventions. Interventions that were not explicitly presented as eating disorder prevention programs produced more positive effects. Experimental design did not appear to be related to positive intervention efforts. Topics of these prevention programs addressed areas such as lifestyle improvements, perfectionism, eating disorder education, dieting, thin-ideal internalization, and negative affect. Although these studies examined numerous psychosocial components, none of these studies addressed spirituality's role as a preventative or buffering factor.

Spirituality

Definition of spirituality

Researchers have conceptualized spirituality in various ways. Love and Talbot (1999) defined spirituality as a process that involves the pursuit of discovering direction and purpose in one's life. According to Mattis (2000), spirituality is complex and encompasses belief in a supernatural dimension of life, a personal relationship with God; living according to God's will, and holding intrinsic beliefs and values. Ross (2003) noted that spirituality is living in accordance with a set of divinely-inspired values and opposing challenges or conflicts to these values. Heath (2006) explained spirituality as a

way of living, critiquing society, affirming dignity and self-worth, achieving sanity, communal solidarity, and social support; and distinguishing the oppressed from their oppressors. Spirituality generates motivating forces in one's life, bonds with other people and nature, a sense of self, and going beyond oneself (Gilbert, 2007). Barnes and Sered (2005) described spirituality as an individual, sometimes non-religious experience benefitting the mind and possibly even the body.

Some researchers maintain that a distinction exists between spirituality and religion. Religion and spirituality are important to the majority of people in the U.S. (Berrett, Hardman, & Richards, 2010). About 80% of the U.S. population identifies with some form of religion (Kosmin & Keysar, 2009). Religion is typically associated with organized, institutional activities. Religion provides a worldview which is acted out in narrative, doctrine, symbols, rites, and gatherings. It involves the practices and rituals of attendance in worship services, the reading of sacred texts, and affiliation with an organized church, mosque, or synagogue (Mattis, 2000). Barnes and Sered (2005) explained that in the United States, "religion" is variously used in reference to belief in divine beings, adherence to a set of ethical or cosmological tenets, ritual practices, prayer, institutions that sponsor communal events, and/or the traditions of a community within which one celebrates holidays or life-cycle events.

Religion encompasses many aspects within the concept of spirituality, usually in the context of a belief in a transcendent being or beings with a meta-narrative which seeks to explain the origins of the world and those living in it, and the questions surrounding life, suffering, death, and after-life (Gilbert, 2007). Speck's (1998, p. 22) conceptualization of religion acknowledges an overlap between religion and spirituality;

religion as a “system of faith that expresses an underlying spirituality, and faith frequently interpreted in terms of rules, regulations, beliefs, and customs”. In sum, the terms “religion” and “spirituality” are overlapping constructs whose specific definitions remain a subject of debate. Both reflect the “feelings, thoughts, experiences, and behaviors that arise from a search for the sacred” (Hill et. al, 1998, p.21).

Although this paper does not attempt to comprehensively account for each culture’s meaning and role of religion and spirituality, it is important to note that conceptualizations of spirituality reflect significant cultural influences. Jagers and Smith (1996) suggested that spirituality is a worldview that is central to certain cultural expressions. For some people, spirituality can be expressed through religion. For example, African-Americans typically embrace the value of religion for its liberating power, the reliance on a higher power, and the practical application of spiritual principles in life (McAdoo, 1993). European-Americans often tend to view religion from a theoretical perspective. They do not necessarily place less value on spiritual matters, but may be more inclined to view spirituality from an intellectual, abstract, and highly conceptual perspective (Thistlethwaite & Engel, 1990). Interpreting and understanding the role of spirituality in the manifestation of mental health is necessary because spirituality in some form is an integral part of all sociocultural systems (Carter, 2002).

Methodological considerations in spirituality and mental health research

Research on spirituality and mental health comprises many disciplines and specializations (Miller & Thoresen, 2003). Individuals studying these areas cannot conduct adequate research without contributions from other specializations and disciplines. Thomas (2004, p. 292) declared that “our best understanding of spirituality

and mental health calls for the use of theoretical perspectives, knowledge and methodologies from disciplines outside of religion and psychology, in addition to selected areas within these traditional constructs.’’ As a result, this will enable researchers to provide methodologically sound research on the linkages of spirituality and mental health.

Different understandings of the words “spirituality” and “religion” naturally shape how scholars study the intersections between spirituality and mental health: selecting phenomena, individuals, groups, or situations to study; analyzing and interpreting data, and evaluating effectiveness, success, or outcomes (Barnes & Sered, 2005). Therefore, clarification of the meaning and concept of spirituality is essential (Coyle, 2002; Tanyi, 2002). The assessment of how spirituality functions continuously eludes health and scientific research (Burton, 1998; Coyle, 2002; Dyson, Cobb, & Forman, 1997; Fehring, Miller, & Shaw, 1997; Koenig, 1995; Mathews et al., 1998). This is, in part, a result of inadequate definitions and a lack of specified conceptual frameworks of spirituality; many research articles do not provide a definition of the concept of spirituality. Hodge (2001) argued for more scientific data on spirituality, particularly as a measurable construct, and documentation of its possible therapeutic function in areas such as social work and mental health. Additionally, Heath (2006) urged mental health researchers to study individuals’ spirituality and not only religious affiliation.

Spirituality and mental health

Although this paper does not exhaust the large literature base documenting the role of spirituality, religion, and mental health, it mentions key issues to consider in studying this area.

Despite methodological issues and idiosyncrasies, medical and psychological professions have acknowledged that religion and spirituality may offer a beneficial influence in human health and healing (Benson, 1996; Koenig, McCullough, & Larson, 2001; Larson, Swyers, & McCullough, 1997; Plante & Sherman, 2001; Richards & Bergin, 2005). For example, a growing body of evidence has recognized spirituality as a key element in the delivery of holistic health care and the enhancement of mental and physical well-being (Miller & Thoresen, 2003). Furthermore, in order to practice ethically and competently, psychologists need to understand and consider religion and spirituality as components of diversity. (American Psychological Association, 2002).

Several studies have documented the positive role of spirituality in college adjustment. Schaffner (2005) found spiritual well-being to be a significant predictor of social college adjustment. In addition, correlational data showed significant positive relationships between spiritual well-being and independence from both mother and father. Phillips (2000) found that spirituality had an effect on the level of college adjustment in African-American students at predominantly white institutions. The frequency of spiritual practices and some religious affiliation was found to help in the overall adjustment to college (defined as the quality of a student's adaptation to the college environment; Baker, & Siryk, 1989), with higher levels of adjustment contributing to better academic success. Addison (1997) found that high levels of spirituality consistently related to college adjustment, coping resources, and locus of control more than religious affiliation. D'Andrea (2004) found that positive spiritual coping styles (e.g., prayer, meditation) enhanced college adjustment, implying that spiritual coping strategies can play an important role in psychological adjustment of new

college students. Maton (1989) noted spirituality was positively related to college adjustment in freshmen undergoing high stress.

Willis, Walston, and Johnson (2001) reviewed a great deal of literature and found that spirituality and religiosity can offer contextual coping mechanisms such as prayer, positive reframing, or support-seeking. At this point, spiritual perspectives and interventions have been integrated with a variety of mainstream therapeutic traditions and treatment modalities and with a great variety of clinical issues and client populations, including but not limited to eating disorders, addictions, dissociative disorders, trauma, antisocial/psychopathic personality disorders, and anxiety disorders, (Richards & Bergin, 2005; Sperry & Shafranske, 2005; Worthington, Kuru, McCullough, & Sanders, 1996).

Researchers need to be aware to not only focus on the positive effects of spirituality and religion but also consider the possibility of its negative or adverse influences (Cook, Dixon, & McGuire, 2012). Moreover, Hood and colleagues (2009) stated that, “it is an overgeneralization to say that religion is necessarily good or bad for one’s health” (p. 445). In any case, spirituality, including but not limited to spiritual well-being, deserves greater consideration in clinical and outcome assessment (Schoenrade, 1995).

Spirituality, Religion, and Eating Disorders

The Theistic Model of Human Nature and Pathology

A theoretical approach that connects eating disorders and spirituality is the Theistic Model of Human Nature and Psychopathology (Richards and Bergin, 1997, 2005). The tenets of this theory are that God exists, humans were created by God, and that God communicates to humans via unseen spiritual processes. Furthermore, the

Theistic Model acknowledges that human development and personality are influenced by biological, social, psychological, cognitive, and affective processes, but the essence of identity and personality is spiritual (Richards and Bergin, 2005). Humans have a mortal body and eternal soul that continues to exist beyond death of the mortal body. The interface of body and soul, or mortal overlay, produces a person's identity and personality (Bergin, 2002). The soul may become obscured by physical defects, hurtful life experiences, distorted perceptions of reality, and negative coping mechanisms. These conditions may cause a person to lose their sense of spiritual identity, as Richards, Hardman, and Berrett (2008) assert is the case with persons with eating disorders.

Spirituality and Eating Disorders

Religious and/or spiritual issues are often considered crucial components in understanding the etiology of, and recovery from, anorexia, bulimia, and compulsive overeating (Plante & Sharma, 2001; Richards, Hardman, & Berrett, 2007). Yet, the majority of documentation describing the relationship between spirituality and eating disorders has been conceptual. For instance, Levine, Piran, and Steiner-Adair (1999) argued that eating problems are existential problems. Emmet (2007) described eating disordered individuals as having "spiritually bankrupt souls...afflicted with one of society's most refractory emotional illnesses"; that is, the significant spiritual struggles people with eating disorders face: finding purpose and meaning in their lives as well as overall life satisfaction. Furthermore, Richards, Hardman, and Berrett conceptualized eating disorders as illnesses of the mind, body, and spirit (2007). Twelve-step self-help groups, such as Overeaters Anonymous (OA) and Anorexics and Bulimics Anonymous

(ABA), have made a similar claim, indicating that eating disorders are a physical, emotional, and spiritual disease (Johnson & Sansone, 1993).

Hardman, Berrett, and Richards (2003) argued that eating disorders undermine a person's spirituality. Furthermore, they discussed the deep spiritual conflicts that many women with eating disorders face: atonement/punishment, role of a higher power, shame, doubt, meaning, control, purpose, connection, love, faith, worth and forgiveness—all essential elements of a spiritual orientation. This information was based on the authors' clinical experiences working with over three-hundred and fifty eating disorder patients at a particular treatment center.

There is a paucity of research, particularly quantitative research, examining the relationships and role of spirituality and eating disorders. A quantitative study (Watkins, Christie, & Chally, 2006) discovered that spiritual well-being and especially existential well-being may be associated with the severity of binge eating. Higher levels of binge eating severity were associated with lower global spiritual and existential well-being scores.

Research has uncovered a direct relationship between anorexic symptoms and religious devotion and an inverse relationship between bulimic symptoms and religious devotion (Joughin, Crisp, Halek, and Humphrey, 1992; Smith, Hardman, Richards, & Fisher, 2003; Smith, Richards, & Maglio, 2004). Smith and colleagues (2003) found that anorexic patients reported feeling closer to God whereas bulimic patients reported feeling estranged from God and religious practice. They explain that this may be a result of anorexic patients feeling successful in controlling their impulses and transcending their physical needs, which is seen as a virtue in many religious traditions. Bulimic patients,

however, may feel that they have yielded to temptation by binge eating and not succeeded in impulse control.

Allport and Ross (1967) categorize a personal style of religiosity as extrinsic or intrinsic. *Extrinsic religiosity* refers to utilization of religion for its social or utilitarian value; *intrinsic religiosity* refers to living one's religion in many areas of one's life. Smith and colleagues (2004) utilized this conceptualization in their study of eating disorder pathology and religiosity in clinical patient and non-clinical undergraduate samples of mostly Mormon women. Women who were characterized as intrinsically religious generally reported less eating disorder pathology than those who were extrinsically religious. Moreover, individuals who endorsed a high level of intrinsic and extrinsic religiosity had the lowest levels of eating disorder pathology and body image disturbance overall. In another study (Forthun, Pidcock, & Fischer, 2003), intrinsic religiosity decreased the chance of developing an eating disorder among women who had family risk factors for eating disturbances such as an immediate family member with an eating disorder. On the other hand, extrinsic religiosity worsened these risk factors. This information has potential to be useful in the understanding of the prevention, development, and treatment of eating disorders.

Recovery

Research concerning the relationship between spirituality and recovery from eating disorders is still relatively sparse. This may be in part due to the fact that discussing and incorporating spirituality into eating disorder treatment can be methodologically challenging for most traditional therapists. It can also be difficult for

researchers to assess the effectiveness of using spirituality since the concept is not always easily quantifiable (Johnson & Sansone, 1993).

Several articles review studies on the relationship between spirituality and eating disorders, including a meta-analysis of eight religiously accommodative outcome studies (McCullough, 1999) and several narrative reviews (e.g., Oman & Thoresen, 2001; Worthington et al., 1996; Worthington & Sandage, 2001). Survey studies have documented that many former patients report that their faith and spirituality were important in recovery (Hall & Cohn, 1992; Hsu, Crisp, & Callendar, 1992; Mitchell, Erlander, Pyle, & Fletcher, 1990; Rorty, Yager & Rosotto, 1993). In a correlational study, researchers found that increases in spiritual well-being during treatment were positively associated with better treatment outcomes, including reductions in eating disorder symptoms and psychological and relationship distress (Smith, Richards, Hardman, & Fischer, 2003). Eating disorder patients reported lower psychological disturbance and eating disorder symptoms at the conclusion of a spiritually-based group treatment compared to patients in the cognitive or emotional groups (Richards, Hardman, Berret, & Egget, 2007).

Twelve-step self-help groups have encouraged the use of spirituality in treatment of eating disorders (Johnson & Sansone, 1993; Yearly, 1987). OA, which focuses on abstinence and spirituality as emphasized in Alcoholics Anonymous, has been lauded for eliciting hope and faith in members (Johnson & Sansone, 1993). Davis, Clance, and Gailis (1999) found that obese women who attended OA meetings reported weight loss that was significantly associated with the importance they attributed to abstinence and spirituality; this suggests that treatment interventions that integrate religious or spiritual

components might also be employed in psychotherapy with patients (or clients) who identify as religious and/or spiritual or who are a part of religious or spiritual cultures.

Summary and current study

College-age women are an at-risk population for disordered eating. Limited research has covered the use of spirituality in treatment and recovery as well as the relationship between spiritual well-being and disordered eating in college women (King, 2010; Weinberger-Litman, 2008). Aforementioned research has generally supported a positive relationship between a person's level of spiritual well-being and mental health. A paucity of spirituality-based research still exists, in part due to the rigorous secular standards of exploratory scientific analysis (Richards, Hardman, & Berrett, 2007). Furthermore, spiritual approaches have been used in mental health treatment, including eating disorder treatment. Overall, faith and spirituality can serve as a resource and healing influence for women with eating disorders (Hsu, Crisp, & Callender, 1992; Richards, Berrett, Hardman, & Eggett, 2006; Rorty, Yager, & Rosotto, 1993; Smith, Richards, Hardman, & Fischer, 2003).

The current study was designed to explore the relationship between spiritual well-being and disordered eating in college-age women. According to Paloutzian and Ellison (1991), spiritual well-being is comprised of religious well-being and existential well-being. Religious well-being is the degree to which individuals report that they experience a satisfying relationship with God or a particular religious affiliation. Religious well-being was hypothesized to be a significant predictor of disordered eating. Furthermore, existential well-being is the sense of life satisfaction and purpose independent of religion. Existential well-being was expected to be a significant predictor of disordered eating.

Overall, women who report higher levels of spiritual well-being were hypothesized to have lower levels of disordered eating than women with lower levels of spiritual well-being. Additionally, spiritual well-being was predicted a greater predictor of disordered eating than religious well-being and existential well-being separately.

Method

Participants

Participants consisted of 158 females ages 18-24; the mean age was 21.69 years with a standard deviation of 1.75. Seventy-eight percent of participants identified as Caucasian, 8% as “Other”, 4% as African-American, 4% as Latina, 3% as Asian, 1% as Pacific Islander, and 1% as Native American. Regarding religious identity, 69% of participants reported being Christian, 29% unaffiliated, 1% Buddhist, and 1% Jewish. In terms of social philosophy, 35% of participants classified themselves as liberal, 50% as moderate, and 15% as conservative.

The majority of participants (93%) reported being single-never married, 6% reported being married, and 1% reported being divorced. Ten percent of participants have a child or children. 29% of participants live with their parents.

Over half of the participants (57%) were full-time college students, 10% were part-time college students, and 33% were not current students. Participants’ education ranged from 6 to 18 years, with the mean being 14.58 years. Participants’ mothers’ highest level of education was as follows: elementary school 1%, high school 38%, associate degree 17%, bachelor’s degree 27%, master’s degree 14%, and doctorate/professional degree 3%. Participants’ fathers’ highest level of education was as follows: high school 46%, associate degree 16%, bachelor’s degree 25%, master’s degree 8%, and doctorate/professional degree 4%.

Regarding eating disorders, 8% of participants reported they are worried they might have anorexia. 5% of participants reported worry they might have bulimia, and 6% of participants worry they might have binge eating disorder. Three percent of participants

stated they had been previous diagnosed with anorexia, 3% with bulimia, 2% with binge eating disorder, and 1% with an eating disorder not otherwise specified. Furthermore, 4% of those with eating disorders sought medical help, 4% sought nutritional guidance, 5% sought mental health treatment, and 1% sought spiritual guidance.

Table 1
Demographics

N = 158 females		Ethnicity	
Age		African-American	4%
M=21.69 years		Asian	3%
SD=1.75		Caucasian	78%
Range 18-24 years		Latina	4%
		Native American	1%
Student Status		Pacific Islander	1%
No	33%	Mixed	8%
Part-Time College	10%		
Full-Time College	57%	Mother's Highest Level of Education	
		Elementary School	1%
Lives with Parents		High School	38%
Yes	29%	Associate Degree	17%
No	71%	Bachelor's Degree	27%
		Master's Degree	14%
Education		Doctorate/Professional	3%
M=14.58			
SD=1.90		Father's Highest Level of Education	
Range 6-18 years		Elementary School	0%
		High School	46%
Religion		Associate Degree	16%
Unaffiliated	29%	Bachelor's Degree	25%
Buddhist	1%	Master's Degree	8%
Christian	69%	Doctorate/Professional	4%
Jewish	1%		
		Diagnosed with Eating Disorder	
Marital Status		Anorexia	3%
Single, never married	93%	Bulimia	3%
Married	6%	BED	2%
Divorced	1%	Other	1%
Have Child(ren)		Sought Professional Help	
Yes	10%	Medical	4%
No	90%	Nutritional	4%
		Mental Health	5%
Social Philosophy		Spiritual/Clergy	1%
Liberal	35%		
Moderate	50%	Worried Might Have Eating Disorder	
Conservative	15%	Anorexia	8%
		Bulimia	5%
		BED	6%

Procedure

Upon approval by the University of Wisconsin-Milwaukee (UWM) Institutional Review Board (IRB) and Principal Investigator's doctoral dissertation committee, data collection was conducted in Fall 2014. The author purchased the right to use the SWBS and obtained authors' permission to utilize the EAT-26. Surveys were posted on SurveyMonkey[®], a cloud-based survey instrument software company. Survey creation and distribution, data collection and storage, and reporting were also hosted by SurveyMonkey[®].

Data was collected via snowball sampling method. Specifically, upper-level psychology students in research methods courses were required to recruit a minimum of four participants who were female ages 18-24. Participants could then forward the survey link to their friends, family, and peers who met said criteria. Students who recruited more participants were given extra credit. Participants were not compensated for their involvement.

Participants were given a URL to access the survey. Before starting, they had to verify that they were 18 years of age or older and were participating voluntarily. They read a page of information explaining that the study entails completing several measures on spirituality, religiosity, and attitudes about one's food, weight, and body image which would take approximately 15 minutes. Furthermore, participants who gave consent to participate were notified that their involvement was voluntary, anonymous, that they may stop at any point without penalty.

Participants completed a short demographics questionnaire (Appendix A) created by the author assessing their age, ethnicity, years of education, student status, religious

affiliation, marital status, parental status, and parents' highest level of education. Additionally, this questionnaire contained an item in which participants indicated whether or not they were worried they might have an eating disorder, and if so, which type. Another item asked whether participants had ever been diagnosed with an eating disorder, and if so, which type. Finally, another item asked whether the participant has ever sought medical, psychological, and/or spiritual treatment for disordered eating, and if so, what kind.

Spiritual well-being. Spiritual well-being was measured using the Spiritual Well-Being Scale (SWBS; Paloutzian & Ellison, 1982), a 20-item self-report instrument composed of two 10-item subscales: Religious Well-Being (RWB) and Existential Well-Being (EWB). The RWB subscale assesses the degree to which individuals report that they experience a satisfying relationship with God or a particular religious affiliation. The EWB subscale assesses the sense of life satisfaction and purpose independent of religion. Even-numbered items are part of the EWB scale, and odd-numbered items comprise the RWB scale.

SWBS items are scored on a 6-point Likert-style scale with responses ranging from "strongly agree" to "strongly disagree"; higher numbers represent greater spiritual well-being. In efforts to prevent response-set bias and induce participant attentiveness, the authors varied the positive and negative wording of the items, with the negative items (nine total) being reverse-scored.

EWB and RWB subscale scores range from 10-60, respectively, with cut-off scores categorized as low (10-20), moderate, (21-49), and high (50-60). Low EWB scores indicate low level of life satisfaction and possible confusion about one's life purpose.

Moderate EWB scores imply moderate levels of life satisfaction. High EWB scores denote a high level of satisfaction and purpose in life. Low RWB scores suggest a negative perception of one's relationship with God. Moderate RWB scores imply a fair view of one's relationship with God. High RWB scores denote a highly positive perception of one's relationship with God.

A sum of the RWB and EWB scores, the Spiritual Well-Being (SWB) score provides an overall, general measure of SWB. Total SWB scores range from 20-120, and cut-off scores categorize individuals having low (20-40), moderate (41-99), or high (100-120) levels of spiritual well-being. The SWBS takes approximately 10-15 minutes to complete (Ellison & Paloutzian, 2009; D'Costa, 1995; Schoenrade, 1995).

The SWBS has a sound theoretical basis and construct definition (D'Costa, 1995). Construct validity, however, depends on the participant's definition of religion and spirituality. The authors of the SWBS describe it as a non-sectarian; the items on the RWB scale might not, however, adequately capture religiosity for individuals whose religion does not have primarily focus on a personal relationship with God. Because few measures of spiritual well-being exist, concurrent validity is difficult to determine. Nonetheless, correlations with similar measures such as Crumbaugh's (1969) Purpose in Life Test (for the EWB, $r = .68$) and Allport and Ross' (1967) measure of Intrinsic Religion (for the RWB, $r = .79$) provide limited information in support of SWBS' concurrent validity. Furthermore, the items on the SWBS support its face validity (Schoenrade, 1995).

In previous studies, the SWBS has yielded high internal consistency across samples and has been an effective measure in various populations and across religious

affiliations (Ellison & Smith, 1991; Genia, 2001; Paloutzian & Ellison, 1991). Genia (2001) assessed the SWBS with a sample of college students. For Catholic students, Cronbach's alpha was found to be .94, .91, .93 for SWB, RWB, and EWB, respectively; Protestant students: .93, .78, .91; Jewish students: .91, .84, .76; and nontraditionally religious students: .93, .87, .88. Data findings also supported the construct and factorial validity of the SWBS.

Disordered eating. Disordered eating was measured using the Eating Attitudes Test-26 (EAT-26); it is based off of the widely used measure of disordered eating, Eating Attitudes Test-40, a sensitive and specific instrument for identifying individuals at increased risk for eating disorders. The EAT-26 assesses food preoccupation, eating behaviors, laxative use and purging (Garner & Garfinkel, 1979; Garner, Garfinkel, Olmstead, & Bohr, 1982).

The EAT-26 consists of 26 survey items, each scored on a 6-point forced Likert scale ranging from 1 (*never*) to 6 (*always*); responses are scored from 0-3, with "sometimes", "rarely", and "never" assigned a score of 0, and "always", "usually", and "often" assigned a score of 3, 2, or 1, respectively.

Scores greater than 20 on the EAT-26 have traditionally been suggestive of anorexia nervosa or bulimia nervosa (Pastore, Fisher, & Friedman, 1996). Scores greater than 11 have been associated with an increased risk for binge eating disorder (Orbitello et al., 2006).

Studies have demonstrated the EAT-26's high levels of reliability and validity. Lee, Kwok, Liao, and Leung (2002) found Cronbach's alpha to be .78 in Chinese female undergraduates, .91 for fat-phobic anorexic patients, .88 for non-fat-phobic anorexic

patients, and .87 for bulimic patients. In samples of college women, Cronbach's alpha was .72 (Masuda, Price, & Latzman, 2011) and .83 (Weinberger-Litman, 2008). The EAT-26 is highly correlated with the EAT-40 ($r = .97$ for female university students; Garner, Garfinkel, Olmstead, & Bohr, 1982). Criterion validity of the EAT-26 yielded a 90% accuracy rate when used to differentially diagnose college women with and without eating disorders; mean EAT-26 scores differed among eating-disordered (31.23), symptomatic (12.58), and asymptomatic individuals (4.95). Positive predictive power was .79, and negative predictive power was .94 (Mintz & O'Halloran, 2000).

Results

Using G*Power Statistical Program (Faul, Erdfelder, Buchner, & Lang, 2009; Faul, Erdfelder, Lang, & Buchner, 2007), minimum desired sample size ($n=64$) was calculated to obtain a statistical power ($1 - \beta$) of approximately .80. A low effect size ($f^2=.10$) was assumed because many factors contribute to disordered eating; this study only focuses on one such factor: spiritual well-being.

Data was converted into a spreadsheet on the Statistical Package for Social Sciences (SPSS[®]) where statistical testing was conducted. Descriptive statistics were calculated (Table 2). EAT-26 scores ranged from 0-54. The mean EAT-26 score was 11.16 with a standard deviation of 10.71. This mean fell below the cut-off scores for disordered eating.

SWBS scores ranged from 40-120. The mean SWBS score was 83.64 with a standard deviation of 19.16, suggesting a sense of *moderate* spiritual well-being. RWB scores ranged from 10-60. The mean RWB score was 37.82 with a standard deviation of 14.22, falling into the *moderate* sense of religious well-being. EWB scores ranged from 15-60. The mean EWB score was 45.87 with a standard deviation of 9.50, reflecting a *moderate* level of life satisfaction and purpose.

Table 2
Means, Standard Deviations, and Ranges

Variable	Mean	Standard Deviation	Range
EAT-26	11.16	10.71	0-54
SWB	83.64	19.16	40-120
RWB	37.82	14.22	10-60
EWB	45.87	9.5	15-60

]

Regarding frequency distributions (Table 3), one participant (<1%) scored in the *low* category, 105 participants (75%) in the *moderate* category, and 34 participants (24%) in the *high* category on SWB. Twenty-three participants (16%) scored in the *low* category, 82 participants (58%) in the *moderate* category, and 36 participants (26%) in the *high* category on RWB. Two participants (1%) scored in the *low* category, 86 participants (60%) in the *moderate* category, and 55 participants (39%) in the *high* category on EWB.

Table 3
Frequency distribution of SWB, RWB, and EWB

Scale	# Low	Approx % Low	# Mod	Approx % Mod	# High	Approx % High
SWB	1	<1	105	75	34	24
RWB	23	16	82	58	36	26
EWB	2	1	86	60	55	39

Due to non-normal distribution, especially of EAT-26, Spearman rank order correlations were calculated to determine the direction and magnitude of the relationship between variables (Table 4). No statistically significant relationship was found between overall spiritual well-being and disordered eating: $\rho = -.019, p = .822$. No statistically significant relationship was found between religious well-being and disordered eating: $\rho = -.023, p = .787$. No statistically significant relationship was found between existential well-being and disordered eating: $\rho = .036, p = .671$. All of these findings were contrary to expected results.

Table 4
Spearman Rank Order Correlations Between Variables (ρ)

	SWB	RWB	EWB
EAT-26	-.019	-.023	.036

The author originally planned to conduct regression analysis to determine the extent to which spiritual well-being (composite of religious and existential well-being) predicted disordered eating. Had a significant correlation been found, effect size (R^2) would have been calculated. Because the correlations between the all of the variables of interest were not significant, however, regression analyses were not conducted. Similarly, overall statistical power would have also be calculated (post-hoc analysis) had statistically significant results been found.

Cronbach's alpha (α) reliability coefficients were calculated for all scales and subscales used (Table 5). Good internal consistency was found for EAT-26 ($\alpha=.88$). Excellent internal consistency was found for SWB ($\alpha=.917$), RWB ($\alpha=.945$), and EWB ($\alpha=.900$).

Table 5
Cronbach's Alpha (α) Reliability Coefficients

Scale/Subscale	Alpha (α)	Internal Consistency
EAT-26	.880	Good
SWB	.917	Excellent
RWB	.945	Excellent
EWB	.900	Excellent

Twenty-four participants (approximately 15% of sample) had EAT-26 scores in the clinical range (Table 6). From this sample, stepwise correlation with SWBS revealed (R^2)= .18. The correlation coefficient increased with using only the scores which fell in the clinical range as compared to the entire sample.

Table 6
Category of Participants Based on EAT-26 Scores

Classification	Number	Approx. % of sample
Clinical	24	15
Non-Clinical	134	85

Discussion

Results summary and conjectures

The relationship between participants' spiritual well-being (SWB) and disordered eating was predicted to be statistically significant and inversely proportional: individuals with high levels of SWB were expected to have significantly lower levels of disordered eating than individuals with low levels of SWB. Said relationship was found to be inversely proportional. Given the very low correlation, however, it is difficult to derive even clinical significance from these findings.

Similarly, religious well-being (RWB) and existential well-being (EWB) were hypothesized to be significant predictors of disordered eating. Because neither of these variables was significantly correlated with disordered eating, they could not be significant predictors. SWB (i.e., combination of EWB and RWB) was expected to be a greater predictor of disordered eating than RWB and EWB separately. Again, because of a non-significant correlation, SWB could not be a significant predictor of disordered eating.

These non-significant results might be due to the fact that a variety of factors contribute to eating disorders, not just one. Furthermore, a non-clinical population was surveyed. Fifteen percent of participants had EAT-26 scores in the clinical range whereas 13.9% of a large sample of undergraduate women scored positive (i.e., endorsing three or more symptoms) on an eating disorder screening (Eisenberg, Nicklett, Roeder, & Kirz, 2011). It should be noted, however, that prevalence rates of individual eating disorder symptoms are higher than those of full clinical diagnoses (ANAD, 2015). Furthermore, only 9% of the participants in the present study reported being diagnosed with an eating disorder, as compared to 19% in a large NIH study (Eisenberg, Nicklett, Roeder, & Kirz,

2011) This said, participants in this study may have underreported disordered eating thoughts and behaviors. On a practical level, clinicians and other individuals working with college-age women should pay special attention to the issue of underreporting of eating disorder symptoms. Specifically, they should compare individuals' reports along with their behavior and observations to make sure problems do not become minimized or overlooked.

Strengths and limitations of present study

This study has a variety of strengths and limitations, and they will be addressed in the context of measures, participant selection, study design, external validity, and participant sample.

Measures. For this study, appropriate measures were used. Both the EAT-26 and SWBS have been studied with college-age females and eating disorders patients. The EAT-26 is commonly used in research on eating disorders. The SWBS has been used in research on spiritual well-being, including but not limited to eating disorder outpatient populations. The SWBS (specifically the RWB scale) is worded in a monotheistic way, possibly not validly capturing the experiences of individuals who ascribe to non-monotheistic religious beliefs.

Participant selection. Electronic data collection could pose quality control problems with regard to participant selection. Although the study explicitly stated the type of participants requested, there was a small chance that someone could forward the electronic link to someone who did not meet the study criteria, enabling him or her to complete the survey.

Study design. Correlation does not imply causation. For causality to be inferred, it needs to be shown that the association between the predictor and the criterion variable is not due to confounding influences. This cannot be achieved in one study alone. Being non-experimental, this study did not include a control group, which threatens its ability to draw definitive conclusions regarding the relationship between college-age women's spiritual well-being and disordered eating. This decision was based on the fact that this was intended to be an exploratory/pilot study.

External validity. This study focused on a relatively small and homogenous (i.e., white Christian) sample of college-age women; results may not necessarily apply to other populations of interest. Although white college-women are at high-risk, other populations (e.g., women of color, men, athletes) also struggle with disordered eating.

Participant sample. Having a non-clinical population in the study skewed the EAT-26 results in a positive direction, meaning the majority of the sample did not fall in the clinical range. Therefore, the study may not adequately capture the relationship between disordered eating and spiritual well-being.

Relationship to Theistic Model

At first glance, lack of significant findings regarding disordered eating and spiritual well-being may appear to mean that there is no relationship between the two. These findings would not support the Theistic Model of Psychopathology. However, when focusing solely on the respondents with EAT-26 scores in the clinical range, the correlation increased slightly and in the predicted direction (i.e., inversely proportional). Following this trend, larger sample sizes would yield significant results.

Under the Theistic Model, spirituality is considered a positive aspect of people's lives. In some cases, however, eating disorders and other psychopathology can fall under the guise of spirituality and/or religion; for example, an individual who fasts excessively at the expense of their health claiming it is part of their spiritual regimen (Brumberg, 2000). Mental health professionals, clergy, and others in religious professions should be aware of this in order to identify problems and intervene properly.

Future research

This study examined a few aspects of college-age women's mental health: disordered eating and spiritual well-being. Although college-age women are a higher risk population for disordered eating, future studies should be conducted with a clinical population to better understand the phenomena of spiritual well-being and disordered eating. Furthermore, previous research has demonstrated that a variety of biological, psychological, and social factors contribute to disordered eating as well the recovery from it; future research should continue examining these factors alone as well as their interaction effects.

Future research should also include a more diverse sample in terms of race/ethnicity and religious background. Furthermore, researchers should create a religious well-being scale that is more inclusive of non-monotheistic religions. Aside from disordered eating, spiritual well-being may be related to other factors in young adults' lives. Scholarship in these areas can help inform the work of mental health and religious professionals dealing with young adult populations. Specifically, this research can guide professional practice by clarifying risk/protective factors and spiritually-based interventions.

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Appendix A: Demographics Questionnaire

Please check the response that best describes you.

Race/Ethnicity (check as many as apply to you):

- Black/African-American
 Hispanic/ Latina/Chicana
 White/European-American
 Asian-American/Pacific Islander
 Native American/American Indian
 Other (please specify) _____

Religious Affiliation

- Unaffiliated
 Buddhist
 Christian
 Hindu
 Jewish
 Muslim
 Wiccan/Pagan

Age _____

Student Status

- Not a student
 Part-time student
 Full-time student

Number of Years of Education _____

Marital Status

- Single, never married
 Married
 Divorced

Parental Status

- Have one or more children
 Do not have children

Living Arrangement

- Live with parents
 Do not live with parents

Parents' highest level of education:

- Elementary/Grammar school
- High School
- Associate's degree
- Bachelor's degree
- Masters degree
- Doctoral/Professional (e.g., PhD, MD, JD, DVM) degree

Social Philosophy

- Liberal
- Moderate
- Conservative

Check all that apply to you:

I have never received psychological, medical, or spiritual treatment for disordered eating.

I'm worried I might have an eating disorder.

- Anorexia
- Bulimia
- Binge Eating Disorder
- Other

I have been diagnosed with an eating disorder

- Anorexia
- Bulimia
- Binge Eating Disorder
- Other

I have met with the following professional(s) specifically for disordered eating:

- Medical (e.g., family doctor, nutritionist/dietician, psychiatrist)
- Psychological (e.g., school counselor/social worker, counselor/psychotherapist, psychologist)
- Spiritual (e.g., chaplain, clergy, spiritual mentor)

Appendix B: Spiritual Well-Being Scale

SWB Scale

For each of the following statements circle the choice that best indicates the extent of your agreement or disagreement as it describes your personal experience:

SA = Strongly Agree	D = Disagree
MA = Moderately Agree	MD = Moderately Disagree
A = Agree	SD = Strongly Disagree

- | | |
|--|-----------------|
| 1. I don't find much satisfaction in private prayer with God. | SA MA A D MD SD |
| 2. I don't know who I am, where I came from, or where I'm going. | SA MA A D MD SD |
| 3. I believe that God loves me and cares about me. | SA MA A D MD SD |
| 4. I feel that life is a positive experience. | SA MA A D MD SD |
| 5. I believe that God is impersonal and not interested in my daily situations. | SA MA A D MD SD |
| 6. I feel unsettled about my future. | SA MA A D MD SD |
| 7. I have a personally meaningful relationship with God. | SA MA A D MD SD |
| 8. I feel very fulfilled and satisfied with life. | SA MA A D MD SD |
| 9. I don't get much personal strength and support from my God | SA MA A D MD SD |
| 10. I feel a sense of well-being about the direction my life is headed in. | SA MA A D MD SD |
| 11. I believe that God is concerned about my problems. | SA MA A D MD SD |
| 12. I don't enjoy much about life. | SA MA A D MD SD |
| 13. I don't have a personally satisfying relationship with God. | SA MA A D MD SD |
| 14. I feel good about my future. | SA MA A D MD SD |
| 15. My relationship with God helps me not to feel lonely. | SA MA A D MD SD |
| 16. I feel that life is full of conflict and unhappiness. | SA MA A D MD SD |
| 17. I feel most fulfilled when I'm in close communion with God. | SA MA A D MD SD |
| 18. Life doesn't have much meaning. | SA MA A D MD SD |
| 19. My relation with God contributes to my sense of well-being. | SA MA A D MD SD |
| 20. I believe there is some real purpose for my life. | SA MA A D MD SD |

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Appendix C: Eating Attitudes Test (EAT-26)

Eating Attitudes Test (EAT-26)©

Instructions: This is a screening measure to help determine whether you might have an eating disorder that needs professional attention. This screening measure is not designed to make a diagnosis of an eating disorder or take the place of a professional consultation. Please fill out the form below as accurately, honestly and completely as possible. There are no right or wrong answers.

Check a response for each of the following statements:		Always	Usually	Often	Some times	Rarely	Never
1.	I am terrified about being overweight.						
2.	I avoid eating when I am hungry.						
3.	I find myself preoccupied with food.						
4.	I have gone on eating binges where I feel that I may not be able to stop.						
5.	I cut my food into small pieces.						
6.	I'm aware of the calorie content of foods that I eat.						
7.	I particularly avoid food with a high carbohydrate content (i.e. bread, rice, potatoes, etc.)						
8.	I feel that others would prefer if I ate more.						
9.	I vomit after I have eaten.						
10.	I feel extremely guilty after eating.						
11.	I am occupied with a desire to be thinner.						
12.	I think about burning up calories when I exercise.						
13.	Other people think that I am too thin.						
14.	I am preoccupied with the thought of having fat on my body.						
15.	I take longer than others to eat my meals.						
16.	I avoid foods with sugar in them.						
17.	I eat diet foods.						
18.	I feel that food controls my life.						
19.	I display self-control around food.						

20.	I feel that others pressure me to eat.						
21.	I give too much time and thought to food.						
22.	I feel uncomfortable after eating sweets.						
23.	I engage in dieting behavior.						
24.	I like my stomach to be empty.						
25.	I have the impulse to vomit after meals.						
26.	I enjoy trying new rich foods.						

Behavioral Questions:							
In the past 6 months have you:		Never	Once a month or less	2-3 times a month	Once a week	2-6 times a week	Once a day or more
A.	Gone on eating binges where you feel that you may not be able to stop?*						
B.	Ever made yourself sick (vomited) to control your weight or shape?						
C.	Ever used laxatives, diet pills or diuretics (water pills) to control your weight or shape?						
D.	Exercised more than 60 minutes a day to lose or to control your weight?						
E.	Lost 20 pounds or more in the past 6 months	YES			NO		
F.	Have you ever been treated for an eating disorder?	YES			NO		

*Defined as eating much more than most people would under the same circumstances and feeling that eating is out of control.

LAURA M. CARTER, Ph.D.
CarterL@uwm.edu

EDUCATION

- | | |
|--|----------------|
| University of Wisconsin-Milwaukee | Milwaukee, WI |
| <ul style="list-style-type: none"> • Doctor of Philosophy in Educational Psychology w/Counseling Psych. specialization (<u>APA-Accredited program</u>) • Dissertation: Disordered Eating and Spirituality in College Women | May 2015 |
| | |
| Loyola University Chicago | Chicago, IL |
| <ul style="list-style-type: none"> • Master of Education in Community Counseling | May 2006 |
| | |
| University of Wisconsin-Eau Claire | Eau Claire, WI |
| <ul style="list-style-type: none"> • Bachelor of Arts in Psychology, <i>cum laude</i> • Minor in women's studies | May 2004 |

CLINICAL & COUNSELING EXPERIENCE: DOCTORAL LEVEL

- Shorehaven Behavioral Health, Inc. [APPIC-Accredited]** 2000 hours Brown Deer, WI
Doctoral Psychology Intern September 2012-August 2013
 Supervisors: Valynda Wells, Ph.D., L.P. and Julie Cajolet-Eckhardt, Psy.D., L.P.
- Conducted clinical interviews with clients and determined appropriate referrals
 - Developed treatment plans and conducted individual psychotherapy with clients who had depression and anxiety related to health, financial, relationship, and/or family issues
 - Administered and scored child, adolescent, and adult psychological assessments for diagnostic appraisal, treatment planning, disability services, and court-mandated situations: WAIS-IV[®], WISC-IV[®], WMS-III[®], MMPI[®]-2, MCMI-III[™], MACI[™], BDI[®]-II, BAI, TAT
 - Wrote psychological evaluations, integrative reports, and other clinical documents using Procentive software application
 - Explained assessment results and implications to clients, families, counselors, and case workers
 - Created safety plans for clients experiencing suicidal ideation
 - Co-facilitated Early Recovery group, an intensive outpatient psychoeducation group for adults with dual diagnoses and AfterCare group, an outpatient group for adults with dual diagnoses who have maintained a greater period of sobriety
 - Administered breathalyzer to group clients with alcohol and/or drug addictions
 - Maintained on-call availability 24/6 for clients
 - Consulted with supervising psychologists, psychiatrists, psychology interns, and counselors about client cases
 - Submitted prior authorizations to insurance companies and billed for client services

CLINICAL & COUNSELING EXPERIENCE: DOCTORAL LEVEL (continued)

Ozaukee County Department of Human Services 415 hours Port Washington, WI
Advanced Doctoral Practicum Student September 2009-August 2010

Supervisor: Joan Kojis, Psy.D., L.P.

- Administered adolescent and adult psychological assessments for diagnostic appraisal, treatment planning, disability services, and court-mandated situations: WASI[®]; MMPI[®]-2; BDI[®]-II; BAI; TAT; diagnostic screening
- Conducted individual psychotherapy for depression, relationship, and family issues
- Created written clinical evaluations and integrative reports
- Provided assessment feedback to clients, families, counselors, and case workers

University of Wisconsin-Milwaukee 46 hours Milwaukee, WI
Master's Practicum Student Supervisor September 2009-December 2009

Supervisor: Anthony Hains, Ph.D., L.P.

- Provided bi-weekly face-to-face individual supervision with three master's counseling students
- Gave weekly feedback on supervisees' journal entries

Zablocki VA Medical Center-Domiciliary 123 [Residential Tx] 698 hours Milwaukee, WI
Doctoral Practicum Student August 2008-August 2009

Supervisors: Michael Haight, Psy.D., L.P. & Snezana Urosevic, Ph.D.

- Provided individual psychotherapy to low-income veterans experiencing mood, anxiety, substance abuse, adjustment, and/or psychotic disorders; and/or relationship concerns
- Co-led the following groups: Rational Emotive Therapy, Problem-Solving, Grief Psychoeducation, Bipolar Psychoeducation, Strengthening Connections: Gender Awareness for VA Residential Patients, Acceptance and Commitment Therapy, and Case Management
- Performed diagnostic screening and administered psychological assessments for diagnostic appraisal and treatment planning: WAIS[®]-III, MMPI[®]-2, BDI[®]-II, BAI[®], PCLS-Weekly/Monthly
- Wrote clinical evaluations and integrative reports
- Communicated assessment feedback to veterans and case workers
- Collaborated with multidisciplinary treatment team on patient care
- Advocated for veterans with mental health crises by escorting them to ER and providing coping strategies
- Maintained current professional knowledge by attending VA Hospital presentations on veterans' mental health

University of Wisconsin-Whitewater Counseling Center 556 hours Whitewater, WI
Doctoral Practicum Student August 2007-May 2008

Supervisor: Richard Jazdzewski, Psy.D., L.P.

- Performed diagnostic intake interviews using *DSM-IV-TR* classification
- Counseled college students experiencing emotional, relationship, academic, and adjustment challenges
- Sought necessary consultation and treatment for students experiencing suicidal ideation
- Consulted with students' families and university officials via phone as appropriate
- Co-facilitated co-ed psychotherapy group, Understanding Self and Others
- Co-created and presented one-time workshops on sleep hygiene and test anxiety

COUNSELING EXPERIENCE: MASTER'S-LEVEL

Dr. Martin Luther King, Jr. College Preparatory High School 190 hours Chicago, IL
Counseling Practicum Student January-May 2006

Supervisor: Angela Cunliffe, MSW

- Assisted minority first generation college-bound students in the college application and preparation process
- Counseled students with social and emotional concerns

Loyola University Chicago Career and Internship Center 313 hours Chicago, IL
Counseling Practicum Student January-May 2006

Supervisor: Jake Livengood, LCSW

- Advised students and alumni in defining career and life goals through individual consultation and Myer-Briggs Type Indicator® and Strong Interest Inventory® analysis
- Facilitated clients' career decision-making processes by providing career resources
- Prepared clients for professional experiences and helped clients identify strengths and skills through résumé critiques and mock interviews

Jane Addams Hull House-Uptown Center 417 hours Chicago, IL
Counseling Practicum Student August 2005-April 2006

Supervisor: Maxine Florell, MSW

- Counseled women survivors of domestic violence using a strengths-based approach
- Informed clients about domestic violence resources and provided support through phone consultation
- Petitioned for an immigrant seeking citizenship through the Violence Against Women Act
- Recruited and collaborated with social service agencies in coordinating a community resource fair at Truman College targeted to low-income Chicago citizens

PROFESSIONAL DEVELOPMENT

Question-Persuade-Refer (QPR) Institute Milwaukee, WI
 May 2013

- Attended a presentation on the Question-Persuade-Refer triage method of suicide prevention

Shorehaven Behavioral Health, Inc. Brown Deer, WI
Didactic Training Seminars January-August 2013

- Attended senior staff members' presentations on the following topics: motivational interviewing, psychopharmacology, *DSM-V*, child assessment, AODA assessment and intervention, family systems assessment and intervention, couples therapy, ethical principles and laws in psychotherapy, cultural competence, personality disorders, trauma, supervision and consultation, attachment theory in child and adult psychotherapy, childhood behavioral disorders, psychoanalytic concepts in therapy, therapeutic alliance
- Watched the following videos of PESI seminars: Bipolar Spectrum: Bringing Evidence Into Practice and The Best Evidence-Based Techniques to Treat Anxiety, Panic, OCD, Phobias & PTSD

PROFESSIONAL DEVELOPMENT (continued)**University of Wisconsin-Milwaukee**

Milwaukee, WI

Safe Space Training

March 2012

- Learned about appropriate terminology and etiquette for lesbian, gay, bisexual, transgender, and intersexed communities
- Discussed issues sexual minorities face and campus resources for sexual minorities and their allies

Campus Connect Training Program

February 2011-February 2012

- Participated in day-long workshop about suicide awareness and prevention on college campuses
- Received instruction on how to train college personnel and students on suicide awareness and prevention
- Co-led interactive presentations for police officers and college students on suicide awareness and prevention

Ozaukee County Department of Human Services

Port Washington, WI

Sex Offender Panel

March 2010

- Attended two-hour panel consisting of a diverse array of male sex offenders discussing offense(s), treatment, and life challenges

Ozaukee County Courthouse

Port Washington, WI

Victim Impact Panel

February 2010

- Attended two-hour panel consisting of families sharing stories of loved ones killed by an intoxicated driver

Zablocki VA Medical Center

Milwaukee, WI

Medical Terminology Course for Non-Medical Professionals

October 2008-May 2010

- Completed ten 90-minute medical terminology modules covering cardiovascular, respiratory, digestive, genitourinary and blood/lymphatic systems and radiology, oncology, psychiatry, and neurology

Marquette University

Milwaukee, WI

Wechsler Adult Intelligence Scale-Fourth Edition (WAIS®-IV) Training

November 2008

- Attended lecture-style continuing education seminar on WAIS®-IV facilitated by Harcourt Assessments Representative John Hanson, Ph.D.

Society of Counseling Psychology (Division 17) Meeting

Chicago, IL

Eating Disorders NOS: Nature and Treatment

March 2008

- Attended two-hour continuing education program facilitated by Lori Tagger, Ph.D., Laurie Mintz, Ph.D., and Susan Kashubeck-West, Ph.D.

The Impact of Working on Psychological Health: Implications for Practice, Public Policy, and Research

- Attended two-hour continuing education program presented by David Blustein, Ph.D.

Chicago Metropolitan Battered Women's Network

Chicago, IL

Domestic Violence Worker Training Program (40 hours)

August 2005

- Completed IL state-mandated training on social, emotional, and legal domestic violence issues and resources

TEACHING & RELATED EXPERIENCE

University of Wisconsin-Milwaukee

Milwaukee, WI
November 2011

Guest Lecturer

Course: *COUNS 715-Multicultural Counseling* (3 cr.)

- Prepared and delivered lecture to approximately 16 master's students on the applications of religion and spirituality in counseling

University of Wisconsin-Milwaukee

Milwaukee, WI
September-December 2011

Associate Lecturer

Course: *COUNS 600-Introduction to Counseling* (3 cr.)

- Designed course curriculum on counseling-related topics such as the history and systems of counseling; counseling techniques; vocational counseling; multicultural issues; ethics; and group processes in counseling
- Taught one class section (approximately 20 master's and 8 undergraduate students) and provided out-of-class individual consultation for students
- Reviewed and selected textbooks and other course reading materials
- Evaluated student coursework and posted grades on an online course management system (Desire2Learn)
- Consulted with academic faculty on course-related issues
- Confronted students' academic misconduct according to university policies

University of Wisconsin-Milwaukee

Milwaukee, WI
October 2009-July 2011

Tutor, GEAR UP Program

- Tutored at-risk, low income, racially/ethnically diverse high school students individually and in small groups
- Mentored and motivated students to set and achieve life goals
- Demonstrated the importance of community service by engaging students in volunteer projects
- Conducted book clubs with students of varying reading levels and abilities
- Provided resources for employment and college readiness (ACT preparation, college/scholarship applications)
- Planned and co-taught a seven-week course on college preparation
- Organized and chaperoned college visits and other field trips
- Created and conducted résumé workshop for ESL and ELL students

University of Wisconsin-Milwaukee

Milwaukee, WI
August 2008-May 2009

Instructor

Course: *ED PSY 101-Planning Your Major and Career* (2 cr.)

- Taught three class sections per semester and provided out-of-class individual consultation for students
- Conducted experiential learning activities to help students identify their interests, values, skills and contextual factors influencing career development
- Facilitated class discussion and guided students through self-evaluation and goal-setting assignments
- Collaborated with supervisor and other instructors on course-related issues
- Evaluated student coursework and posted grades using online course management system

TEACHING & RELATED EXPERIENCE (continued)**Lakeland Community College**

West Allis, WI

Guest Speaker

April 2007

Course: *Counseling College Students* (3 cr.)

- Spoke with masters-level students about doctoral study in counseling psychology

Loyola University Chicago

Chicago, IL

Teaching Assistant

January-May 2006

Course: *Career and Life Planning Lab* (2 cr.)

- Evaluated assignments, led class discussion, and provided feedback as students explored career and life goals

University of Wisconsin-Eau Claire

Eau Claire, WI

Teaching Assistant

September 2002-May 2003

Courses: *Psychology of Adolescence*, *Research Methods in Psychology*, and *U.S. Women: Gender, Race, and Class* (3 cr. each)

- Held test review sessions, proctored examinations, and evaluated oral presentations, papers and examinations

RESEARCH EXPERIENCE**University of Wisconsin-Milwaukee**

Milwaukee, WI

Career and Work Development of Dislocated Workers

October 2007-September 2010

Supervisor: Nadya Fouad, Ph.D., L.P.

- Worked with research team to conceptualize study, collect data via interviews, transcribe interviews, analyze data using Consensual Qualitative Research (CQR) method, prepare and present poster at conference, write and edit manuscript, and publish journal article

Diabetic Adolescents' Transitions to High School

September 2006-September 2010

Supervisor: Anthony Hains, Ph.D., L.P.

- Collaborated with research team to review literature, evaluate data using CQR method, organize and deliver conference poster presentation, write and edit manuscript, and publish journal article

Autonomy Support and Engagement in Pre-Kindergarten

September-December 2009

Supervisor: Johnmarshall Reeve, Ph.D.

- Partnered with research team members and collected data through kindergarten classroom observation

Persistence of Women in Engineering: A Qualitative Study

June 2009

Supervisor: Nadya Fouad, Ph.D., L.P.

- Transcribed audiotapes

Workplace Bullying: A Call to Vocational Psychologists

March 2008-April 2009

Supervisor: Nadya Fouad, Ph.D., L.P.

- Collaborated with research team to conceptualize study, review literature, write and edit manuscript, and co-author journal article

RESEARCH EXPERIENCE (continued)**University of Wisconsin-Milwaukee**

Milwaukee, WI

Familial Influence on Career Development

September 2006-March 2009

Supervisor: Nadya Fouad, Ph.D., L.P.

- Teamed with student researchers to critique literature, create measurement scale, generate IRB proposal, prepare and present research at conferences, write and edit manuscript, and co-author journal article

Pediatric Pain: A Qualitative Review

September 2006

Supervisor: Anthony Hains, Ph.D., L.P.

- Transcribed audiotapes

Loyola University Chicago

Chicago, IL

Subjective Well-Being in Urban Adolescents

September 2004-May 2006

Supervisor: Elizabeth Vera, Ph.D., L.P.

- Worked in partnership with other students; entered, computed, and analyzed numerical data using SPSS™; prepared and presented research at conferences

Developing Counselor Competency: Supervision Training for Mental Health Professionals

January-June 2005

Supervisors: Marilyn Susman, Ph.D., Sharon Silverman, Ed.D., Elizabeth Vera, Ph.D., L.P.

- Analyzed qualitative data with research partner

University of Wisconsin-Eau Claire

Eau Claire, WI

Work-Life Satisfaction

March-May 2004

Supervisor: Susan Turell, Ph.D., L.P.

- Teamed with faculty and students, entered data into SPSS™, and analyzed qualitative and quantitative surveys

Perceptions of Mental Illness

September 2002-May 2004

Supervisor: Lori Bica, Ph.D.

- Collaborated with research partner; reviewed literature; conceptualized and designed research study; wrote IRB and intramural grant proposals; collected, entered, and analyzed data; prepared study for conference presentations

Peer Death Experience

January 2001-May 2002

Supervisor: Lori Bica, Ph.D.

- Collaborated with research partner, examined literature; wrote IRB proposal; collected, entered, calculated, and analyzed data; prepared poster for conference presentation

PUBLICATIONS

Fleischman, K.M., Smothers, M.K., Christianson, H.F., **Carter, L.M.**, Hains, A.A., & Davies, W.H. (2011). Experiences of adolescents with Type 1 Diabetes Mellitus as they transition from middle to high school. *Journal of School Counseling*, 9, 4. Retrieved from <http://files.eric.ed.gov/fulltext/EJ933170.pdf>

PUBLICATIONS (continued)

Fouad, N.A., Cotter, E. W., Fitzpatrick, M.E., Kantamneni, N., **Carter, L.**, & Bernfeld, S. (2010). Development and validation of the Family Influence Scale. *Journal of Career Assessment*, 18, 3, 276-291.

Fitzpatrick, M.E., Cotter, E.W., Bernfeld, S.J., **Carter, L.M.**, Kies, A.L., & Fouad, N. A. (2011). The importance of workplace bullying to vocational psychology: Implications for research and practice. *Journal of Career Development*, 38, 6, 479-499.

Cotter, E., Bernfeld, S., **Carter, L.**, Fouad, N., Gray, I.D., & Liu, J.P. (2012). A qualitative study of the dislocated working class. *Journal of Career Development*, 39, 3, 287-310.

PROFESSIONAL PRESENTATIONS

Bena, K., Vera, E. M., Dick, L., Caldwell, J., Weide, L., Corona, R., Vázquez, V., Kach, J., Blackmon, S., **Carter, L.M.**, Steele, C., Merle, C., Daniel, I., Gonzales, R., Morgan, M., & Fowler, N. (2006). *Urban adolescent stress and subjective well-being: The moderating effects of hope, optimism, social support, and self-esteem*. Presented poster at the National Latina/o Psychological Association Conference, Milwaukee, WI.

Carter, L.M. (2010). *Helping high school students with career planning*. Oral presentations at University of Wisconsin-Milwaukee & Pulaski High School, Milwaukee, WI.

Carter, L.M., & Fouad, N.A. (2009). *A qualitative study on the career and work development of dislocated workers*. Oral presentation at HIRE Center, Milwaukee, WI.

Cotter, E.W., Bernfeld, S.J., **Carter, L.**, Fouad, N.A., Gray, I.D., & Liu, J.P. (2009). *A qualitative study on the career and work development of dislocated workers*. Poster presentation at the Society for Vocational Psychology poster session at the American Psychological Association Annual Conference, Toronto, ON, Canada.

Fitzpatrick, M.E., Cotter, E.W., Bernfeld, S., **Carter, L.**, & Kies, A. (2009). *Influence of workplace bullying on vocational psychology: A research agenda*. Accepted for poster presentation at the biennial meeting of the Society of Vocational Psychology, St. Louis, MO.

Carter, L. M. (2009). *An evaluation of the Twelve-Step model in the treatment of eating disorders*. Poster presentation at the American Psychological Association Annual Conference, Toronto, ON, Canada.

Fouad, N.A., Chen, Y.L., Altman B.A., Bernfeld, S.J., **Carter, L.M.**, Cotter, E., Fitzpatrick, M.E., Gray, I., Liu, J., & Kantamneni, N. (2008). *Family influence on career development: Instrument development and validation*. Presented at the American Psychological Association Annual Conference, Boston, MA.

Fouad, N.A., Chen, Y.L., Altman B.A., Bernfeld, S.J., **Carter, L.M.**, Cotter, E., Fitzpatrick, M.E., Gray, I., Liu, J., Kantamneni, N., & Tulasi, P. (2008). *Family influence on career development: Instrument development and validation*. Presented poster at the International Conference of Counseling Psychology, Chicago, IL.

PROFESSIONAL PRESENTATIONS (continued)

Hains, A.A., Smothers, M., Fowell, H.L., **Carter, L.M.**, & Fleischman, K.M. (2007). *Experiences of adolescents with type I diabetes as they transition into high school: A qualitative account*. Presented poster at the American Psychological Association Annual Conference, San Francisco, CA.

Jashinsky, T., Gray, I.D., **Carter, L.**, Steldt, K., Gilbert, M., Hart, K., & Renard, D. (2007). *Changing heartache to hope: A university/CBO collaboration*. Presented orally at the University of Wisconsin Milwaukee's School of Education Conference, Glendale, WI.

Jashinsky, T., Gray, I.D., **Carter, L.M.**, Steldt, K., Gilbert, M., Hart, K., & Renard, D. (2007). *A model for community-university collaboration in adolescent mental health care*. Presented poster at the American Psychological Association Annual Conference, San Francisco, CA.

Jashinsky, T., Steldt, K., **Carter, L.M.**, Gilbert, M., Gray, I.D., Hart, K., & Renard, D. (2007). *Use of psychological measures with adolescent girls in an urban community setting*. Presented poster at the American Psychological Association Annual Conference, San Francisco, CA.

Vera, E. M., Gonzales, R., Morgan, M., Conners, W., Bena, K., Caldwell, J., **Carter, L.M.**, Anderson, M., Clarke, M., Weide, L., Marshall, L., Grant, J., Fowler, N., & Merle, C. (2006). *Urban adolescent stress and subjective well-being: The moderating effects of hope, optimism, social support, and self-esteem*. Accepted for poster presentation at the American Psychological Association Annual Conference, New Orleans, LA.

Vera, E. M., Gonzales, R., Morgan, M., Conners, W., Bena, K., Caldwell, J., **Carter, L.M.**, Anderson, M., Clarke, M., Weide, L., Marshall, L., Grant, J., Fowler, N., & Merle, C. (2006). *Well-being in urban adolescents: Interpersonal, individual, and community influences*. Accepted for poster presentation at the Midwestern Psychological Association Convention, Chicago, IL.

Vera, E. M., Gonzales, R., Morgan, M., Conners, W., Bena, K., Caldwell, J., **Carter, L.M.**, Anderson, M., Clarke, M., Weide, L., Marshall, L., Grant, J., Fowler, N., & Merle, C. (2005). *Well-being in urban adolescents: Interpersonal, individual, and community influences*. Accepted for poster presentation at the American Psychological Association Annual Conference, Washington, D.C.

Carter, L. M., & Lubich, C. L. (2004). *The effect of media type and content on perceptions of people with mental disorders*. Accepted for poster presentation at the 2004 National Conference for Undergraduate Research, Indianapolis, IN. Presented poster at the Psi Chi program at the Midwestern Psychological Association Convention, Chicago, IL.

Carter, L. M., & Lubich, C. L. (2003). *Influence of movies and college major on views of Tourette's Syndrome*. Presented poster at the University of Wisconsin-Eau Claire Student Research Day, Eau Claire, WI; the National Conference for Undergraduate Research, Salt Lake City, UT; and the Psi Chi program of the Midwestern Psychological Association Convention, Chicago, IL.

Berkowitz, S., & **Carter, L.M.** (2002). *Peer death experiences*. Presented poster at the University of Wisconsin-Eau Claire Student Research Day, Eau Claire, WI.

OTHER PROFESSIONAL EXPERIENCE

UWM Department of Curriculum and Instruction

Milwaukee, WI

Associate Academic Advisor

November 2011-August 2012

- Advised current and prospective undergraduate and post-baccalaureate students on issues related to admission, registration, graduation, and certification; assist students experiencing academic difficulties; served on academic appeals committee; completed initial review of admission materials for undergraduate and post-baccalaureate programs; approved students for student teaching and graduation/certification; worked collaboratively with other units on campus; provided general information about careers in education

Hyde & Lichter Management Consultants, Inc.

Milwaukee, WI

Consultant

February-March 2008/November 2011

- Participated in role plays with managers and evaluated their performance as part of a corporate managerial training program

EMERGE Early Literacy Program

Milwaukee, WI

Reading Assessment Administrator

March-May 2011

- Evaluated Head Start preschoolers' reading skills through administration of Peabody Picture Vocabulary Test-III™, Individual Growth and Development Indicator—Rhyming, and other assessments

Milwaukee Mathematics Partnership

Milwaukee, WI

Program Assistant

January 2007-May 2008

- Designed system for organizing files; took notes and pictures at meetings; researched and wrote documentation for annual report and website; sorted materials for professional development sessions