

2008

Body awareness, eating attitudes, and spiritual beliefs of women practicing yoga

Katherine Anne Dittmann
San Jose State University

Recommended Citation

Dittmann, Katherine Anne, "Body awareness, eating attitudes, and spiritual beliefs of women practicing yoga" (2008). *Master's Theses*. Paper 3515.
http://scholarworks.sjsu.edu/etd_theses/3515

This Thesis is brought to you for free and open access by the Master's Theses and Graduate Research at SJSU ScholarWorks. It has been accepted for inclusion in Master's Theses by an authorized administrator of SJSU ScholarWorks. For more information, please contact Library-scholarworks-group@sjsu.edu.

**BODY AWARENESS, EATING ATTITUDES,
AND SPIRITUAL BELIEFS OF WOMEN PRACTICING YOGA**

A Thesis

Presented to

The Faculty of the Department of Nutrition, Food Science, and Packaging

San José State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

by

Katherine Anne Dittmann

August 2008

UMI Number: 1459687

INFORMATION TO USERS

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleed-through, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

UMI[®]

UMI Microform 1459687

Copyright 2008 by ProQuest LLC.

All rights reserved. This microform edition is protected against unauthorized copying under Title 17, United States Code.

ProQuest LLC
789 E. Eisenhower Parkway
PO Box 1346
Ann Arbor, MI 48106-1346

© 2008

Katherine Anne Dittmann

ALL RIGHTS RESERVED

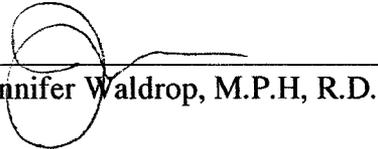
APPROVED FOR THE DEPARTMENT OF NUTRITION AND FOOD SCIENCE



Marjorie Freedman, Ph.D.

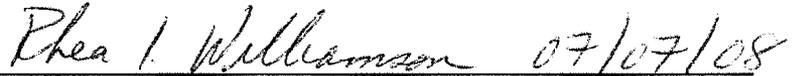


Amy Beddoe, Ph.D., R.N.



Jennifer Waldrop, M.P.H, R.D.

APPROVED FOR THE UNIVERSITY



07/07/08

ABSTRACT

BODY AWARENESS, EATING ATTITUDES, AND SPIRITUAL BELIEFS OF WOMEN PRACTICING YOGA

By Katherine Anne Dittmann

Study 1 tested whether spiritual readiness in women who practice postural yoga was associated with greater body awareness, body responsiveness, intuitive eating, and body satisfaction, with body mass index (BMI) as a covariate. Participants completed questionnaires on these measures. As predicted, they scored higher than average on all measures. There were significant correlations ($p > 0.01$) among all main variables except between spiritual readiness and intuitive eating, and between BMI and both body awareness and spiritual readiness. Women's reasons for practicing (i.e., psychospiritual or physical) did not affect scores on these measures. Study 2 evaluated interviews in a subset of the original sample. Qualitative data showed that women who practiced postural yoga reported improvements in body satisfaction, disordered eating, and self-acceptance which they attributed in part to their yoga practice and its associated spirituality.

ACKNOWLEDGEMENTS

Thank you to my committee Dr. Marjorie Freedman, Dr. Amy Beddoe, and Jennifer Waldrop for your patience and support during the lengthy process of learning too late, the art of keeping things simple. I am grateful for your expertise in thesis clarification, data organization, writing for publication, and Amy in particular, for your understanding of yoga and mindfulness and helping to translate my thoughts into appropriate language.

Thank you to Jennifer Daubenmeir for conferring with me on the details of your research and helping to illuminate mine. Thank you to Suzanne Hasselle-Newcombe for allowing me to borrow from your work. Thank you to Brian Rodriguez and Erin Madden for your assistance in data analysis. I know it seems like a small contribution, but you really steered me in the right direction.

Thank you to Sherri Baptiste Freeman and Anne O'Brien for your generous assistance in finding participants! You helped when I was nearly desperate. Thank you! Thank you immensely to Kofi Busia for the most auspicious opportunity to collect data at the Yogacharya Festival. May we meet again. I also thank the Yoga Studio at Larkspur Landing teachers Tony Briggs, Maritza, Peggy Orr, Barbara Fabbri, and Katie Jay for your input and allowing me to poach your students. I give special thanks to Tony as my primary teacher. Simply being in your studio has helped make this possible. Thank you also to Melinda and Suzannah for listening.

Thank you to all the wonderful women who took time to complete the surveys. Special thanks to those of you who allowed me access to very private parts of your lives through the interviews. You are an inspiration. Namaste.

Finally, thank you to my parents for supporting me financially while completing this project. It would have been more difficult otherwise.

PREFACE

The journal article was written and formatted according to the publication guidelines of *Psychology of Women Quarterly*. The remainder of the manuscript was written according to the *Publication Manual of the American Psychological Association* (5th Edition, 2001).

TABLE OF CONTENTS

	Page
List of Tables	x
Chapter One: Introduction	1
Introduction	2
Review of the Literature	3
Chapter Two: Journal Article	12
Title Page	13
Abstract	14
Introduction	15
Study 1	22
Method	22
Results	29
Discussion	38
Study 2	46
Method	46
Results	47
Discussion	54
General Discussion	56
References	58
Chapter Three: Summary and Recommendations, References	63
Discussion	64

References	78
Appendixes	83
A. IRB Approval	84
B. Questionnaire	85

LIST OF TABLES

		Page
Table 1.	Group Selection Criteria	28
Table 2.	Sample and Group Means for Main Variables	29
Table 3.	Sample Characteristics	30
Table 4.	Spiritual Beliefs of Sample	31
Table 5.	Correlations Between Main Variables for Total Sample	32
Table 6a.	Open-Ended Questions	34
Table 6b.	Open-Ended Questions	35
Table 6c.	Open-Ended Questions	36
Table 6d.	Open-Ended Questions	37

CHAPTER 1

INTRODUCTION AND REVIEW OF THE LITERATURE

Introduction

Body image disturbances and eating disorders affect more than five million Americans, mainly women and girls (American Dietetic Association, 2001). Theories explaining these phenomena range from medical models of psychological pathologies to feminist social theories (Daubenmier, 2005; Garrett, 1996; Lester, 1997). Women in Western cultures experience a paradox: susceptibility to over-valuation of the female physical form coupled with the desire to be respected for thoughts and abilities. Femaleness itself may be seen as a liability. Often a woman's chosen recourse is to rebel against her own body, seen as confining and preventing her from reaching her full potential; she begins to see it as "other"—an obstacle to overcome (Lester, 1997). This resistance can mark the descent on the continuum from nagging body dissatisfaction to a life-threatening eating disorder (Polivy & Herman, 1987).

This study explores how the practice of postural yoga and perceived spirituality relate to factors that influence body dissatisfaction and disordered eating. The study had three aims: (a) to determine levels of body awareness, body responsiveness, intuitive eating, and overall body satisfaction (as indicators of healthy body image and eating attitudes) in a group of women who practiced yoga; (b) to explore whether women's reasons for practicing yoga (either physical or psychospiritual) made a difference on these same measures; and (c) to investigate women's stories about yoga's role in recovery from disordered eating and body image. It was predicted that women who practiced yoga would have higher than average levels of body awareness, body

responsiveness, intuitive eating, body satisfaction, and spiritual readiness, and that their reasons for practicing yoga would account for differences among measures.

Review of the Literature

Women experiencing body dissatisfaction are apt to place great importance on their physical appearance and to simultaneously devalue other personal characteristics, strengths, and skills (Garrett, 1996). Fredrickson and Roberts (1997) dub this tendency self-objectification, a form of self-consciousness that causes a woman to view herself primarily from an observer's perspective as if her physical body were perennially on display. The causes of self-objectification are attributed to socialization differences between boys and girls and the cultural sexualization of the female body (Fredrickson & Roberts, 1997).

Continued viewing of oneself as an object is thought to create distance between a woman and her internal bodily cues and sensations. When compared to men, women have shown less ability to identify these internal experiences (Frederickson & Roberts, 1997). The constant monitoring of one's appearance may lead to dieting behaviors and disordered eating, requiring active suppression of hunger cues, argued to contribute to a suppression of internal awareness (Frederickson & Roberts, 1997). Lack of interoceptive awareness is one characteristic of eating disorders such as anorexia nervosa and bulimia nervosa (Garner, Olmstead, & Polivy, 1983).

Chronic dieting and eating disorders are associated with identity disturbances and an "unstable sense of self" (Polivy & Herman, 2007, p.64). Lester (1997) suggested that anorexia nervosa is an expression of Cartesian dualism where a split exists between

internal and external selves, or mind and body. Garrett (1996) posits that this split constitutes a spiritual crisis as the afflicted attempts to reconcile her two selves. The disorder is a journey both away from and back to herself, from illness through recovery. In this sense, some women may find spirituality as protective against disordered eating and body image disturbance and useful during recovery.

If extreme body image disturbance and eating disorders can be conceptualized as a dualistic split between mind and body, yogic philosophy offers a perspective that joins the two (yoga means “union”) and provides a methodology for unification of the mind, body, and spirit, that is said to lead to union with the divine. One aspect, or limb, of the eight-limbed yoga philosophy involves specific physical postures called *asanas*. Through asana practice, attention is focused inward and the practitioner is said to transcend the mind-body divide and experience the true Self or soul (Iyengar, 1993). Thus, postural yoga uses the body as a vehicle for self-discovery through observation and attention.

However, Frawley (1998) wrote, in order to reap these benefits, the asanas should be taught in conjunction with the eight-limbed yogic philosophy and in combination with more specialized practices such as breathing exercises and meditation. Asanas “can be beneficial to everyone, but these can have little or nothing to do with the spiritual dimensions of yoga” (Frawley, 1998, p. 22). Although traditionally the yoga practitioner is expected to approach yoga as a spiritual practice, yoga is not always practiced this way. People attracted to yoga may experience different kinds of benefits depending upon their level of commitment to and orientation toward yoga practice.

The Relationship Between Spiritual Beliefs and Eating Disorders

Recent research suggests religious or spiritual beliefs may play opposing roles in the maintenance of and recovery from eating disorders (Jacobs-Pilipski, Winzelberg, Wilfley, Bryson, & Taylor, 2005; Smith, Hardman, Richards, & Fischer, 2003; Smith, Richards, & Maglio 2004). Smith et al. (2004) found that women with anorexia nervosa displaying intrinsic (devout) religiosity were more likely to use their piety to justify the illness, recalling asceticism. In contrast, Jacobs-Pilipski et al. (2005) found that women who scored higher in religiosity were more likely to use prayer or meditation to mollify their eating disorder symptoms. Similarly, Smith et al. (2003) showed a modest positive correlation between improvements in spiritual well being during the course of eating disorder treatment and positive treatment outcome. Kim (2004) found negative religious coping style to correlate with decreased body satisfaction and greater dieting while overall religiosity was associated with increased self-esteem, which mediated body satisfaction.

Garrett (1996) proposed the experience of anorexia nervosa as a spiritual journey, from disorder through recovery, with parallels to the ascetics of past centuries. Starvation and self-denial symbolize purification and isolation from the world in preparation for a rebirth and reunification physically, socially, and spiritually. This sense of reconnection has been theorized to characterize recovery (Garrett, 1996). Moreover, Garrett recommends “taking seriously the spiritual lives of clients” and “encouraging physical practices which deepen bodily awareness” as part of treatment (Garrett, 1997, p. 270). Yoga, as well as other practices, she states, are “deliberately used to develop a

sense of a unified self.” Garrett also suggests that recovery can only take place through “active reembodiment” (1997, p. 270).

Firmly held spiritual beliefs are not a determinant for recovery. For some, faith may serve as an effective coping skill, an omnipresent external motivator to call upon when internal motivation weakens. And because faith is such an individual matter, conceptualizing it sufficiently in order to measure it is a difficult task (Hill & Pargament, 2003). One problem with measuring spirituality is that many such instruments measure belief in a way that is biased toward Western concepts of religion. Recent interest in differentiating between religiosity and spirituality and a focus on beliefs over practice has prompted the development of new scales (Miller, 2004; King, Jones, Barnes, Low, & Walker, 2006).

Emerging from the cultural division between “church religion” and “secularization” in America is a new religiosity often described as “mystical” or “spiritual” (Campbell, 1978). Sociologist Ernst Troeltsch outlined three main types of religion in 1931 and one can observe their evolution today as church religion, sect religion, and spiritual or mystical religion. The third type will be explored here using Campbell’s analysis (1978) and yoga as an example and may help explain why Westerners use yoga as a spiritual path.

Mystical religion is characterized by attempts to explain religious experience that go beyond a religious doctrine. One prominent belief common to mystical religions is that of spiritual evolution or the concept of a soul’s progression toward reunification with the divine. Inherent in this concept is non-dualism meaning that the body and mind are

less in opposition and there is room for their integration.

A second belief common to mystical religion is “religious relativity.” Essential religious truths from different faiths are tolerated and all paths are considered to lead to the same place, the same God or absolute being. Still, it can be argued that believers who subscribe to this notion inevitably recognize their chosen path as the “purest” path while minimizing others (Campbell 1978). This religious tolerance, along with syncretism of philosophical ideas, makes mystical religion a good companion for secularists who have effectively rejected “organized religion” yet have not totally abandoned the idea of God, “divine energy,” or “something bigger.”

Exploring mystical religion as a secular American is typically described as being “spiritual, but not religious.” In fact, one fifth of Americans could describe themselves in this way (Fuller, 2001). These seekers may show an interest in yoga or Buddhism, for example, over traditional organized religion (Zinn, 1980). Spiritual or mystical religion, according to Troeltsch also embraces the individual, a distinctly American ideal that may be popular with secularists (Campbell, 1978). Hence, there is no need for a spiritual liaison, such as a priest or rabbi, nor for a formal place of worship or congregation.

Yoga can be duly modified to fit this construct. Not considered a true religion (though it is historically associated with Hinduism and Buddhism), yoga is in the realm of mystical and spiritual religion (Zinn, 1980). Individual practice is encouraged, though the help of a teacher is advised. Yoga is, for the most part, non-dual, concerned with seeking unity with the divine, interested in seeking Truth, and highly syncretic as it has been modified to fit within the Western cultural context (Zinn, 1980).

Self-Objectification and Body Awareness

Fredrickson and Roberts (1997) have identified self-objectification as a contributing factor to eating disorders and body dissatisfaction. Higher self-objectification in women is associated with diminished attention to internal bodily cues. If self-objectification constitutes a lack of body awareness, then the antidote may be regular positive experiences with the body, including exercise. However, there is evidence that exercise does not promote increased body satisfaction in young women as it may for the general population. In some cases, the more a woman exercises, the more dissatisfaction she is likely to incur (Strelan, Mehaffey, & Tiggemann, 2003; Tiggemann & Williamson, 2000).

Gender differences in body satisfaction have been explained by reasons for exercise (McDonald & Thompson, 1992; Tiggemann & Williamson, 2000). Women were shown to exercise more often for appearance or weight-related reasons, which was associated with increased incidence of body dissatisfaction and disordered eating attitudes. Men were more likely to exercise for health reasons or to improve the functionality of their bodies (MacDonald & Thompson, 1992). In contrast, Tiggemann and Kuring (2004) showed that women had greater awareness of internal bodily states than men and that this awareness was not correlated with disordered eating.

Yoga and Body Awareness

Daubenmier (2005) suggested mind-body exercise might elicit different effects on self-objectification and body awareness than other forms of exercise and tested the hypothesis comparing yoga with aerobic exercise in a sample of 139 mostly white,

middle class women. Results revealed an association between yoga practice and a greater sense of body awareness, body satisfaction, and diminished disordered eating attitudes as well as a correlation between more frequent yoga practice and lower self-objectification. The author expanded the concept of body awareness into two components: awareness of internal bodily sensations and degree of responsiveness to them. This delineation enabled Daubenmier to pinpoint *responsiveness* as the mediating mechanism between self-objectification and disordered eating attitudes. The finding suggests that self-objectification may limit one's ability to respond appropriately to bodily signals, but does not necessarily suppress awareness of internal bodily sensations (Daubenmier, 2005). It follows that women who are not only aware of bodily needs, but also respond to them appropriately are likely to have fewer disordered eating attitudes. A second study incorporated a two-month Anusara yoga immersion program that measured "embodiment" (body awareness and body responsiveness), self-objectification, and psychological well-being (Impett, Daubenmier, & Hirschman, 2006). Pre- to post immersion was associated with decreased self-objectification while more frequent yoga practice was associated with increased body awareness, but not responsiveness, among women. Thus, yoga's effect on body awareness and self-objectification remains unclear.

Mindfulness and Disordered Eating

A multi-faceted and collaborative approach is recommended for the treatment of eating disorders and many levels of treatment are available (APA, 2006). However, even the most widely researched modalities such as cognitive behavioral therapy fail to be effective for a large number of eating disordered patients (Fairburn, Cooper, & Shafran,

2003). Hence, there is a call for new and innovative treatments such as mindfulness- and acceptance-based therapies (Kristeller, Baer, & Quillian-Wolever, 2006). Mindfulness- and acceptance-based therapies are adapted from Buddhist philosophy (Palmer, Birchall, Sadhana, Gatward, McGrain, & Parker, 2003). Mindfulness is described as the ability to cultivate non-reactive, non-judgmental awareness (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). This skill is believed to lead to accepting the way things are in the present moment (Baer et al, 2006).

Several therapies that incorporate mindfulness have been adapted for eating disorders. Dialectical behavioral therapy (Linehan, 1993) has treated both bulimia nervosa and binge eating disorder (BED) (Palmer et al, 2003; Safer, Telch, & Agras, 2001; Wiser & Telch, 1999;). Mindfulness-based cognitive therapy (Segal, Williams, & Teasdale, 2002) was applied to the treatment of BED (Baer et al, 2006). Acceptance and commitment therapy (Hayes, Stosahl, & Wilson, 1999) has been used to treat anorexia nervosa (Heffner, Sperry, Eifert, & Detweiler, 2002). Mindfulness-based eating-awareness training has been explored in a BED population (Kristeller & Hallett, 1999).

Intuitive Eating and Eating Disorders

Intuitive eating is characterized by eating patterns that rely on hunger and satiety cues rather than on emotional or situational cues. Originally outlined by Tribole and Resch (1995), intuitive eating is considered an adaptive style of eating associated with psychological well being (Tylka, 2006). Tylka's (2006) intuitive eating model measures qualities associated with "healthy eating." The absence of eating disordered symptomology does not necessarily imply intuitive eating, but intuitive eating may buffer

the development of eating disorders. Higher scores on the Intuitive Eating Scale (IES) were found associated with fewer eating disorder symptoms, less body dissatisfaction, greater interoceptive awareness, and lower BMI. Positive relationships were found between IES and self-esteem, optimism, proactive coping, and life satisfaction. In another study, Tylka and Wilcox (2006) found that intuitive eating predicted variance in scores of psychological well being independent from disordered eating. Thus, intuitive eating is a unique construct that describes healthy eating behaviors. Its relationship to yoga has not been evaluated.

CHAPTER 2
JOURNAL ARTICLE

**BODY AWARENESS, EATING ATTITUDES,
AND SPIRITUAL BELIEFS OF WOMEN PRACTICING YOGA**

K. A. Dittmann, M. R. Freedman, Ph.D., A. Beddoe, Ph.D., R.N,

and J. Waldrop, M.P.H., R.D.,

San José State University, San José, California.

Contact:

Katherine A. Dittmann

Email: kadittmann@hotmail.com

ABSTRACT

Study 1 tested whether spiritual readiness in women who practice postural yoga was associated with greater body awareness, body responsiveness, intuitive eating, and body satisfaction, with body mass index (BMI) as a covariate. Participants completed questionnaires on these measures. As predicted, they scored higher than average on all measures. There were significant correlations ($p > 0.01$) among all main variables except between spiritual readiness and intuitive eating, and between BMI and both body awareness and spiritual readiness. Women's reasons for practicing (i.e., psychospiritual or physical) did not affect scores on these measures. Study 2 evaluated interviews in a subset of the original sample. Qualitative data showed that women who practiced postural yoga reported improvements in body satisfaction, disordered eating, and self-acceptance which they attributed in part to their yoga practice and its associated spirituality.

Keywords: Yoga, eating disorder, body image, intuitive eating, body awareness, body responsiveness, body satisfaction, spirituality, mindfulness

Introduction

Body image disturbances and eating disorders affect more than five million Americans, mainly women and girls (American Dietetic Association, 2001). Theories explaining these phenomena range from medical models of psychological pathologies to feminist social theories (Daubenmier, 2005; Garrett, 1996; Lester, 1997). Women in Western cultures experience a paradox: susceptibility to over-valuation of the female physical form coupled with the desire to be respected for thoughts and abilities. Femaleness itself may be seen as a liability. Often a woman's chosen recourse is to rebel against her own body, seen as confining and preventing her from reaching her full potential; she begins to see it as "other"—an obstacle to overcome (Lester, 1997). This resistance can mark the descent on the continuum from nagging body dissatisfaction to a life-threatening eating disorder (Polivy & Herman, 1987).

This study explores how the practice of postural yoga and perceived spirituality relate to factors that influence body dissatisfaction and disordered eating. The study had three aims: (a) to determine levels of body awareness, body responsiveness, intuitive eating, and overall body satisfaction (as indicators of healthy body image and eating attitudes) in a group of women who practiced yoga; (b) to explore whether women's reasons for practicing yoga (either physical or psychospiritual) made a difference on these same measures; and (c) to investigate women's stories about yoga's role in recovery from disordered eating and body image. It was predicted that women who practiced yoga would have higher than average levels of body awareness, body

responsiveness, intuitive eating, body satisfaction, and spiritual readiness, and that their reasons for practicing yoga would account for differences among measures.

Women experiencing body dissatisfaction are apt to place great importance on their physical appearance and to simultaneously devalue other personal characteristics, strengths, and skills (Garrett, 1996). Fredrickson and Roberts (1997) dub this tendency self-objectification, a form of self-consciousness that causes a woman to view herself primarily from an observer's perspective as if her physical body were perennially on display. The causes of self-objectification are attributed to socialization differences between boys and girls and the cultural sexualization of the female body (Fredrickson & Roberts, 1997).

Continued viewing of oneself as an object is thought to create distance between a woman and her internal bodily cues and sensations. When compared to men, women have shown less ability to identify these internal experiences (Frederickson & Roberts, 1997). The constant monitoring of one's appearance may lead to dieting behaviors and disordered eating, requiring active suppression of hunger cues, argued to contribute to a suppression of internal awareness (Frederickson & Roberts, 1997). Lack of interoceptive awareness is one characteristic of eating disorders such as anorexia nervosa and bulimia nervosa (Garner, Olmstead, & Polivy, 1983).

Chronic dieting and eating disorders are associated with identity disturbances and an "unstable sense of self" (Polivy & Herman, 2007, p.64). Lester (1997) suggested that anorexia nervosa is an expression of Cartesian dualism where a split exists between internal and external selves, or mind and body. Garrett (1996) posits that this split

constitutes a spiritual crisis as the afflicted attempts to reconcile her two selves. The disorder is a journey both away from and back to herself, from illness through recovery. In this sense, some women may find spirituality as protective against disordered eating and body image disturbance and useful during recovery.

If extreme body image disturbance and eating disorders can be conceptualized as a dualistic split between mind and body, yogic philosophy offers a perspective that joins the two (yoga means “union”) and provides a methodology for unification of the mind, body, and spirit, that is said to lead to union with the divine. One aspect, or limb, of the eight-limbed yoga philosophy involves specific physical postures called *asanas*. Through asana practice, attention is focused inward and the practitioner is said to transcend the mind-body divide and experience the true Self or soul (Iyengar, 1993). Thus, postural yoga uses the body as a vehicle for self-discovery through observation and attention.

However, Frawley (1998) wrote, in order to reap these benefits, the asanas should be taught in conjunction with the eight-limbed yogic philosophy and in combination with more specialized practices such as breathing exercises and meditation. Asanas “can be beneficial to everyone, but these can have little or nothing to do with the spiritual dimensions of yoga” (Frawley, 1998, p. 22). Although traditionally the yoga practitioner is expected to approach yoga as a spiritual practice, yoga is not always practiced this way. People attracted to yoga may experience different kinds of benefits depending upon their level of commitment to and orientation toward yoga practice.

The Relationship Between Spiritual Beliefs and Eating Disorders

Recent research suggests religious or spiritual beliefs may play opposing roles in the maintenance of and recovery from eating disorders (Jacobs-Pilipski, Winzelberg, Wilfley, Bryson, & Taylor, 2005; Smith, Hardman, Richards, & Fischer, 2003; Smith, Richards, & Maglio 2004). Smith et al. (2004) found that women with anorexia nervosa displaying intrinsic (devout) religiosity were more likely to use their piety to justify the illness, recalling asceticism. In contrast, Jacobs-Pilipski et al. (2005) found that women who scored higher in religiosity were more likely to use prayer or meditation to help mollify their eating disorder symptoms. Similarly, Smith et al. (2003) showed a modest positive correlation between improvements in spiritual well being during the course of eating disorder treatment and positive treatment outcome. Kim (2004) found negative religious coping style to correlate with decreased body satisfaction and greater dieting while overall religiosity was associated with increased self-esteem, which mediated body satisfaction.

Garrett (1996) proposed the experience of anorexia nervosa as a spiritual journey, from disorder through recovery, with parallels to the ascetics of past centuries. Starvation and self-denial symbolize purification and isolation from the world in preparation for a rebirth and reunification physically, socially, and spiritually. This sense of reconnection has been theorized to characterize recovery (Garrett, 1996). Moreover, Garrett recommends “taking seriously the spiritual lives of clients” and “encouraging physical practices which deepen bodily awareness” as part of treatment (Garrett, 1997, p. 270). Yoga, as well as other practices, she states, are “deliberately used to develop a

sense of a unified self.” Garrett also suggests that recovery can only take place through “active reembodiment” (1997, p. 270).

Self-Objectification and Body Awareness

Fredrickson and Roberts (1997) have identified self-objectification as a contributing factor to eating disorders and body dissatisfaction. Higher self-objectification in women is associated with diminished attention to internal bodily cues. If self-objectification constitutes a lack of body awareness, then the antidote may be regular positive experiences with the body, including exercise. However, there is evidence that exercise does not promote increased body satisfaction in young women as it may for the general population. In some cases, the more a woman exercises, the more dissatisfaction she is likely to incur (Strelan, Mehaffey, & Tiggemann, 2003; Tiggemann & Williamson, 2000).

Gender differences in body satisfaction have been explained by reasons for exercise (McDonald & Thompson, 1992; Tiggemann & Williamson, 2000). Women were shown to exercise more often for appearance or weight-related reasons, which was associated with increased incidence of body dissatisfaction and disordered eating attitudes. Men were more likely to exercise for health reasons or to improve the functionality of their bodies (MacDonald & Thompson, 1992). In contrast, Tiggemann and Kuring (2004) showed that women had greater awareness of internal bodily states than men and that this awareness was not correlated with disordered eating.

Yoga and Body Awareness

Daubenmier (2005) suggested mind-body exercise might elicit different effects on self-objectification and body awareness than other forms of exercise and tested the hypothesis comparing yoga with aerobic exercise in a sample of 139 mostly white, middle class women. Results revealed an association between yoga practice and a greater sense of body awareness, body satisfaction, and diminished disordered eating attitudes as well as a correlation between more frequent yoga practice and lower self-objectification. The author expanded the concept of body awareness into two components: awareness of internal bodily sensations and degree of responsiveness to them. This delineation enabled Daubenmier to pinpoint *responsiveness* as the mediating mechanism between self-objectification and disordered eating attitudes. The finding suggests that self-objectification may limit one's ability to respond appropriately to bodily signals, but does not necessarily suppress awareness of internal bodily sensations (Daubenmier, 2005). It follows that women who are not only aware of bodily needs, but also respond to them appropriately are likely to have fewer disordered eating attitudes. A second study incorporated a two-month Anusara yoga immersion program that measured "embodiment" (body awareness and body responsiveness), self-objectification, and psychological well-being (Impett, Daubenmier, & Hirschman, 2006). Pre- to post immersion was associated with decreased self-objectification while more frequent yoga practice was associated with increased body awareness, but not responsiveness, among women. Thus, yoga's effect on body awareness and self-objectification remains unclear.

Mindfulness and Disordered Eating

A multi-faceted and collaborative approach is recommended for the treatment of eating disorders and many levels of treatment are available (APA, 2006). However, even the most widely researched modalities such as cognitive behavioral therapy fail to be effective for a large number of eating disordered patients (Fairburn, Cooper, & Shafran, 2003). Hence, there is a call for new and innovative treatments such as mindfulness- and acceptance-based therapies (Kristeller, Baer, & Quillian-Wolever, 2006). Mindfulness- and acceptance-based therapies are adapted from Buddhist philosophy (Palmer, Birchall, Sadhana, Gatward, McGrain, & Parker, 2003). Mindfulness is described as the ability to cultivate non-reactive, non-judgmental awareness (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). This skill is believed to lead to accepting the way things are in the present moment (Baer et al, 2006).

Several therapies that incorporate mindfulness have been adapted for eating disorders. Dialectical behavioral therapy (Linehan, 1993) has treated both bulimia nervosa and binge eating disorder (BED) (Palmer et al, 2003; Safer, Telch, & Agras, 2001; Wiser & Telch, 1999). Mindfulness-based cognitive therapy (Segal, Williams, & Teasdale, 2002) was applied to the treatment of BED (Baer et al, 2006). Acceptance and commitment therapy (Hayes, Stosahl, & Wilson, 1999) has been used to treat anorexia nervosa (Heffner, Sperry, Eifert, & Detweiler, 2002). Mindfulness-based eating-awareness training has been explored in a BED population (Kristeller & Hallett, 1999).

Intuitive Eating and Eating Disorders

Intuitive eating is characterized by eating patterns that rely on hunger and satiety cues rather than on emotional or situational cues. Originally outlined by Tribole and Resch (1995), intuitive eating is considered an adaptive style of eating associated with psychological well being (Tylka, 2006). Tylka's (2006) intuitive eating model measures qualities associated with "healthy eating." The absence of eating disordered symptomology does not necessarily imply intuitive eating, but intuitive eating may buffer the development of eating disorders. Higher scores on the Intuitive Eating Scale (IES) were found associated with fewer eating disorder symptoms, less body dissatisfaction, greater interoceptive awareness, and lower BMI. Positive relationships were found between IES and self-esteem, optimism, proactive coping, and life satisfaction. In another study, Tylka and Wilcox (2006) found that intuitive eating predicted variance in scores of psychological well being independent from disordered eating. Thus, intuitive eating is a unique construct that describes healthy eating behaviors. Its relationship to yoga has not been evaluated.

Study 1

Method

Research Design. This study used questionnaires to examine current spiritual beliefs, body awareness, eating attitudes, and motivations of women practicing yoga. Data for Study 1 were collected with a Likert-type and multiple-choice questionnaire as well as qualitative commentary. Data for Study 2 were collected through recorded

interviews to clarify questionnaire answers pertaining to history of body dissatisfaction and disordered eating.

Participants. Women ≥ 18 years of age who regularly practiced yoga, as defined by attending a class or practicing at home at least once a week, were eligible for inclusion and completed either an online or identical paper questionnaire ($N = 157$).

Procedure. Volunteers were recruited from yoga studios and fitness centers in a West Coast metropolitan area. Participants were informed of the study through in-class announcements by the instructor or investigator and offered the option of a paper questionnaire or the online version (surveymonkey.com) accessed through the study's Web page. Additional participants were recruited through individual teacher emailings, flyers, and accompanying cards directing them to an informational Web page and the online version of the questionnaire. Both forms of the questionnaire took approximately 20 minutes to complete.

Sixty-nine filled out the paper version of which 50 were gathered by the investigator at the Yogacharya Festival in July 2007. There were 127 responses to the online version. Of the 196 total responses, 39 were discarded as incomplete. Those who chose to complete the paper questionnaire on the premises were entered into a drawing for a \$50 online gift certificate to a retailer of yoga merchandise. The tickets for the drawing were not connected to responses in any way. After the drawing, tickets were destroyed.

After completing the survey, participants were asked if they would agree to participate in a 15-minute interview to gather further information on how their yoga

practice may have affected their body satisfaction and eating attitudes. (Results of these interviews are presented in Study 2.) Eighteen women agreed to be interviewed.

Interviews were conducted by phone and were recorded. All recordings were destroyed at the conclusion of the study. The study's protocol was given full approval by a University Institutional Review Board in California.

Survey instruments

Yoga practice. Participants answered questions about length of time (months or years) of regular yoga practice, proficiency (beginner to advanced), and locations where they practiced. Additional questions assessed reasons for practicing, demographic information, and self-reported weight and height for determination of BMI. Participants were asked how meaningful several common yoga rituals (e.g., chanting "Om", ending the practice with hands in a prayer position) were. Questions in this section were designed by the author or modified from Hasselle-Newcombe (2005). This questionnaire has not been validated.

Eating Attitudes. Eating attitudes were assessed using the IES (Tylka, 2006). Intuitive eating is characterized by eating patterns that rely on hunger and satiety cues rather than on emotional or situational cues and focuses on behaviors thought to maintain overall health rather than focus on maladaptive eating. The 21-item IES measures three factors: (a) unconditional permission to eat (when hungry and what food is desired); (b) eating for physical rather than emotional reasons; and (c) reliance on internal hunger and satiety cues to determine when and how much to eat. Sample questions include: "I try to avoid certain foods high in fat, carbohydrates, or calories," "If I am craving a certain

food, I allow myself to have it,” “I find myself eating when I am bored, even when I’m not physically hungry,” and “I can tell when I am slightly full.” Participants answered each question on a scale from one (*strongly disagree*) to five (*strongly agree*). Construct validity of the IES has been demonstrated by a negative relationship to both eating disorder symptomology and poor interoceptive awareness. Cronbach’s α for the IES in the present study was .87

Body Awareness and Responsiveness. Body awareness and responsiveness were measured using two scales. The first, developed by Daubenmeir (2005), measures body responsiveness, or the extent of a person’s responsiveness to bodily sensations, as differentiated from sensitivity to bodily sensations regardless of response. The instrument was modified for the present study to measure responses on a five-point scale instead of the original seven-point scale. Questions include: “I am confident that my body will let me know what is good for me,” “I ‘listen’ to my body to advise me about what to do,” and “I enjoy becoming aware of how my body feels.” Responses range from one (*not at all true about me*) to five (*very true about me*). Cronbach’s α for the original scale was .83 (Daubenmier, 2005). Cronbach’s α for the present study was .74. This scale has not been validated.

The second scale used to measure body awareness is the eight-item observe subscale from the Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2006). The observe facet is defined as observing, noticing, and attending to body sensations, one’s surroundings, and to perceptions, thoughts and feelings. Observe items include: “When I’m walking, I deliberately notice the sensations of my body moving,” “I notice how

foods and drinks affect my thoughts, bodily sensations, and emotions,” and “I notice the smells and aromas of things.” Responses range from one (*not at all true about me*) to five (*very true about me*). The observe subscale has previously shown good internal consistency with a Cronbach’s α coefficient of .83. In this present sample the observe subscale demonstrated a Cronbach’s α of .87.

Body Satisfaction. A single Likert-type item, “On the whole, I am satisfied with my body” followed the previous two scales and was used to rate body satisfaction on a scale from one (*not at all true about me*) to five (*very true about me*).

Spiritual Readiness. A scale that measures spiritual readiness and includes both theistic and nontheistic approaches to spirituality was not found in the literature so a questionnaire was designed for this study. Items on the Spiritual Readiness Scale were developed from Fuller’s (2006) notion of wonder, which he argues is ignited through religious ritual and practice. Fuller believes that wonder leads a person to ponder ontological questions including meaning and purpose. Spiritual readiness was measured using items designed by the author to assess the meaningfulness of ritual (eight items), and the importance of seeking out meaning, purpose, and sacred experience (nine items). Participants assessed the meaningfulness of ritual elements common to yoga, such as the opening and/or closing chant of *Om*, dedication of the practice to someone or something, and the significance placed on ending asana practice with corpse pose. Likert-type responses range from one (*not at all meaningful*) to five (*very meaningful*). Participants assessed the importance of spiritual seeking and meaning with items such as “Seeking the sacred is important to me,” “The search for meaning is important to me,” and

“Connecting to ‘something bigger’ is important to me.” Responses ranged from one (*not at all important*) to five (*very important*).

Validity of the Spiritual Readiness Scale has not been established. In this sample internal reliability was high. Cronbach’s α for the Spiritual Readiness Scale was .88, suggesting strong internal reliability. Cronbach’s α for the Meaningfulness of Ritual subscale was .82 and for the Importance of Seeking subscale was .87.

Instruments were scored according to author guidelines. The spiritual readiness (SR) score was determined by averaging the combined scores from Importance of Seeking and Meaningfulness of Ritual subscales for a total possible score of five. Minimum requirement for case inclusion in analyses was a valid score for intuitive eating (IE), body responsiveness (BR), body awareness (BA), and spiritual readiness (SR). ($N = 157$).

To determine whether differences existed between subjects who practiced yoga for psychospiritual reasons and those who practiced for physical or appearance reasons, comparison groups were determined by a subset of questions from the “reasons for continuing to practice yoga” questions. Cronbach’s α were used to determine which questions to include and which to eliminate. Twenty-eight cases did not indicate strong reasons for practicing in either area and were not included in between-group analyses. The final scale had an internal reliability greater than .80. Table 1 summarizes group selection criteria. Descriptive statistics were run across the entire sample and between groups. Correlations using Pearson’s r compared BA, BR, IE, BS, and SR along with BMI. Other variables used in analyses both across and between groups included BMI,

age, years of practice, frequency of practice, frequency of home asana practice, main mode of practice, level of proficiency, preferred style practiced, ethnicity, education, and teaching experience. Variables used to describe sample characteristics of spiritual beliefs were God concept, religiosity, spirituality, inclination to think about meaning or purpose to life, and other types of spiritual practice or affiliation (Appendix A). Qualitative data included questions regarding perceived changes in the way a woman feels about her place in the universe, the way she relates to her body, the ability to transfer yoga to other aspects of daily life, and preexisting issues about body image and disordered eating.

Table 1. Group Selection Criteria

Group 1 (<i>n</i> = 99)	Group 2 (<i>n</i> = 30)
<p style="text-align: center;">Psychospiritual Reasons</p> <p style="text-align: center;">(Includes cases in which scores of Psychospiritual Reasons were ≥ 4.0)</p> <p>Questions for Psychospiritual Reasons:</p> <ol style="list-style-type: none"> 1. Becoming aware of feelings 2. Managing moods/ feelings 3. Self-knowledge 4. An aspect that could be considered spiritual 5. An aspect that could be considered meditative 6. To increase mindfulness 7. The religio-philosophical foundations of yoga <p>(Cronbach's $\alpha = 0.90$)</p>	<p style="text-align: center;">Physical/ Appearance Reasons</p> <p style="text-align: center;">(Includes cases in which scores of Psychospiritual Reasons were ≤ 3.99, and Physical /Appearance Reasons were ≥ 4.0)</p> <p>Questions for Physical/Appearance Reasons:</p> <ol style="list-style-type: none"> 1. Physical exercise 2. Physical strength 3. Stretching/ flexibility 4. I like how my body looks from doing yoga 5. Improving physical appearance <p>(Cronbach's $\alpha = 0.84$)</p>

Results

The majority of the sample was white, middle class, and college educated. The mean age for this sample was 47.4 years ($SD = 11.19$) with a range of 22–72 years. Average BMI (calculated from self reported height and weight) was 22.2 ($SD = 2.94$) ranging from 16.3–32.8. Average number of years of yoga practice was 12.1 ($SD = 9.21$) ranging from 4 months to 40 years. Means for the main variables (BR, BA, IES, SR, and BS) across the sample are presented in Table 2. Characteristics of respondents' yoga practice are summarized in Table 3. Spiritual beliefs are summarized in Table 4. Correlations for these variables, along with BMI, are presented in Table 5.

Table 2. Sample and Group Means for Main Variables

Variable	Sample ($N = 157$)	Group 1 ($n = 99$)	Group 2 ($n = 30$)	<i>t</i> -test between groups	Sig. (2-tailed)
Body Awareness	4.1 ($\pm .65$)	4.17 ($\pm .64$)	4.03 ($\pm .72$)	.961	.342
Body Responsiveness	3.9 ($\pm .62$)	3.92 ($\pm .64$)	3.83 ($\pm .61$)	.681	.499
Intuitive Eating	3.5 ($\pm .53$)	3.42 ($\pm .53$)	3.50 ($\pm .52$)	-.738	.464
Spiritual Readiness	4.0 ($\pm .65$)	4.22 ($\pm .43$)	3.54 ($\pm .75$)	4.660	.000
Body Satisfaction	3.9 ($\pm .93$)	4.06 ($\pm .85$)	3.59 (± 1.15)	2.065	.046

Table 3. Sample Characteristics (N = 157)

Variable		N	%
Education	High School	3	2
	Some College	29	18
	Bachelor's Degree	54	34
	Advanced Degree	73	46
Frequency of practice (times/ week)	1-3	68	43
	4-6	82	52
	7-9	8	5
Main mode of practice	Group classes, studio	96	61
	Group classes, gym	19	12
	Alone, self guided	32	20
	Other	11	7
Freq of home practice (hours/ week)	No home practice	37	23
	<1hr/wk	24	15
	1-2 hrs/wk	56	35
	3-5 hrs/wk	24	15
	>5 hrs/wk	17	11
Proficiency	Beginner/Int. Beg.	15	10
	Adv. beginner	19	12
	Intermediate	34	21
	Intermediate/advanced	54	34
	Advanced	37	23
Preferred style	Vinyasa/ Flow	48	31
	Iyengar	46	30
	Anusara	15	10
	Astanga	7	5
	Power Yoga	6	4
	Therapeutic, Vini	6	4
	Bikram	3	2
	No specific style	6	4
	Other	19	12
Are you qualified to teach yoga?	Yes	76	48
	No	68	42
	In training	15	9

Table 4. *Spiritual Beliefs of Sample (N = 157)*

Variable		N	%
God concept	Personal God	33	21
	Impersonal spirit/ force	46	29
	God is within	68	43
	No God, spirit, life force	5	3
	Don't know	6	4
Self-rated religiosity	1 Not at all	37	24
	2	25	16
	3	51	33
	4	22	14
	5 Very	21	14
Self-rated spirituality	1 Not at all	1	1
	2	8	5
	3	21	13
	4	53	33
	5 Very	76	48
Do you often think about meaning and purpose to life?	Yes	140	89
	No	8	5
	Not sure	10	6
Religious affiliation	Yes	60	38
	No	99	62
What tradition are you affiliated with?	Catholicism	16	28
	Christianity	7	12
	Judaism	3	5
	Syncretism	9	16
	Buddhism & related	15	26
	Hinduism & related	3	5
Other	4	7	

Table 5. Correlations Between Main Variables for Total Sample ($N = 157$)

Variable	BMI	BR	BA	IE	SR
BMI	—	—	—	—	—
Body Responsiveness	-.286 *	—	—	—	—
Body Awareness	.046	.398 *	—	—	—
Intuitive Eating	-.274 *	.406 *	.235 *	—	—
Spiritual Readiness	-.107	.310 *	.281 *	.043	—
Body Satisfaction	-.354 *	.464 *	.353 *	.470 *	.273 *

* Correlation is significant at the 0.01 level (2-tailed).

The total sample was divided into two subgroups according to their given reasons for practicing yoga. Group 1 ($N = 99$) reported they practiced yoga for psychospiritual reasons while Group 2 ($N = 30$) reported they practiced for physical or appearance reasons. Age, BMI, and years of practice were normally distributed throughout the sample. Unequal variance of the above three variables was determined by the Levene statistic ($p > .05$) when running the independent sample t test for between group comparison. There were no differences between the groups regarding age, $t(52.54) = -1.17, p > .05$, BMI $t(50.39) = 1.22, p > .05$, or years of yoga practice experience $t(59.68) = .84, p > .05$.

A chi-square test showed differences between the two groups regarding frequency of home asana practice, $\chi^2(4, N = 129) = 11.48, p < .05$, and “main mode” of practice, $\chi^2(5, N = 129) = 17.10, p < .01$. The psychospiritual group was more likely to have a home practice (87% of respondents) and to practice at home more frequently. In the

psychospiritual group, 28% ($N = 33$) practiced at home three or more hours per week while 90% ($N = 27$) of the physical group practiced at home only two hours per week or less. Twenty-two percent of the psychospiritual group said their yoga practice was mostly “self-guided ” while only 7% of the physical group respondents identified their practice as self-guided. In addition, a greater proportion of women in the physical group (34%) reported that their main mode of yoga practice was in classes at a gym compared to 7% of women in the psychospiritual group. Yoga class attendance at a dedicated yoga studio was similar between groups (psychospiritual group = 62%, the physical group = 59%).

The groups did not differ in proficiency, preferred yoga style, ethnicity, education, or teaching ability. The two groups did differ in self-rated religiosity ($\chi^2(4, N = 129) = 11.57, p < .05$) and spirituality ($\chi^2(4, N = 129) = 21.44, p < .001$). Similarly, the physical group was less likely to report a regular spiritual practice ($\chi^2(3, N = 129) = 9.99, p < .05$). There were no significant between group differences in God concept, inclination to think about meaning and purpose, religious affiliation, religious tradition practiced, or frequency of such practice. Means for the five main variables by group are presented in Table 2. A between-group comparison (independent samples t test, equal variances not assumed) of the main variables (BR, BA, IES, SR, and BS) showed significant differences in spiritual readiness ($t(35) = 4.66, p < .001$) and body satisfaction ($t(37) = 2.07, p < .05$). There were no significant differences found among the two groups and those without strong reasons for practicing when compared as a group.

Open-ended questions and their responses were examined and coded into like categories to identify common themes within the sample. Some cases fell into multiple categories; therefore, there are more responses than cases. Three questions that elicited interesting responses are presented in Table 6a-d.

Table 6a. Open-Ended Questions

Question 79: Since beginning your yoga practice, how has the way you feel about your place in the world or universe changed, if at all?	
Response Categories	Sample Responses
a. <i>Feeling more connected/ part of a whole/ part of a divine plan/ more secure/ sense of purpose (n = 77)</i>	“Yoga has chipped away at my feelings and beliefs of separation.” “I have come to feel smaller, like one drop in the ocean.” “I view myself as part of the divine expression.” “The divine plan unfolds as I am ready to receive it.” “I’ve found my path.” “More connected to others. I feel we all are one.” “I now feel I am part of a tremendous team.” “I see that we/the universe are interdependent.” “My place in this world is to serve.”
b. <i>More peaceful/ balanced/ calm/ grounded (n = 25)</i>	“Sense of peace, balance, harmony.” “I am softer, calmer.”
c. <i>Improved ability to relate to others/ tolerancel/ openness/ self-efficacy/ self-assuredness (n = 34)</i>	“I am more open to others. More understanding.” “I’m less judgmental of myself and others.” “I’m more in touch with myself.” “More patient.” “More considerate, compassionate.” “[I feel] much more entitled to be here.” “More forgiving of myself and others.” “More able to deal with people gracefully. “More comfortable, confident.”
d. <i>More optimistic/ satisfied (n = 10)</i>	“I have a belief in the goodness of life.” “I now have tools for transformation.” “Less anxiety about achievement.” “Not as anxious, depressed.” “More satisfied.” “I wanted to end life, now I want to see life unfold joyously!”
e. <i>Other (n = 4)</i>	“More at odds with conventional existence.” “Yoga has helped me adjust well to major life changes”

Table 6b. Open-Ended Questions

Question 80: Since beginning your yoga practice, how has the way you feel about your body changed, if at all?	
Response Categories	Sample Responses
a. <i>Improved body image/ acceptance/ content/ happy/ love</i> (n = 65)	“I am now OK with myself.” “I feel more contentment with the way I look.” “I have definitely become more comfortable in my own body.” “I’m more kind with my thoughts about how I look.” “My feelings, although somewhat doubtful, are much improved about my body.” “I feel better both in my body and about it.” “Yoga has been the only thing that has significantly helped me deal with my [body image] issues.”
b. <i>Improved awareness/ connection/ more in tune/ more open</i> (n = 32)	“Before I found the practice, my body seemed more like a foreign space that I lived in. Now I see my body as a tool, home...” “My ability to read the physical signals of my body [has changed]” “I trust my body to tell me what it needs.” “Better awareness and sensitivity.” “I have better awareness of the connection between mind and body.”
c. <i>Appreciation/functionality/respect</i> (n = 29)	“I find satisfaction in my physical ability over my physical appearance; I treasure the body I’ve been given.” “I feel very grateful for my body and what it does for me each day.” “At 50, I’m just glad it works.”
d. <i>Improved strength/ flexibility/ mobility/ fluidity/ grace</i> (n = 4)	“I walk more gracefully,” “I feel stronger and straight.” “More flexible and relaxed.”
e. <i>No change</i> (n = 11)	“Still insecure about my body image.” “Still feel only somewhat satisfied with my body.” “At this moment, I am unhappy about my body.” “I have always had a bad body image. I struggle with accepting the number on the scale.” “I’ve always had an OK relationship to my body—no huge hang-ups.”
f. <i>Other</i> (n = 9)	“I feel pleasure that there are things I can do now that I couldn’t do 20 years ago.” “I am 50 now and not as ‘young and beautiful’ as I used to be, but I feel more beautiful in all the other ways.” “I realize as I age that I do not have to stop working the body.” “More accepting of aging.”

Table 6c. Open-Ended Questions

Question 83: Are you able to apply any aspects of yoga to your life outside of class?	
Response Categories	Sample Responses
a. <i>Yamas, niyamas/ "being yoga"/ open heart/ more "conscious"/ compassion (n = 62)</i>	"Ahimsa [non-violence] is a huge part of my life." "The yogic path is a lifestyle, not a path." "I run an ashram." "Yoga practice has taught me to be more compassionate and patient." "Yoga really begins when you step of the mat and go into the world." "Off the mat is my <i>real</i> yoga practice."
b. <i>Bring body awareness to daily movement, posture (n = 19)</i>	"I stand taller." "More conscious of my body, standing, walking, movement."
c. <i>Mindfulness/ being present/ non-judgment/ non-reactivity (n = 18)</i>	"I am mindful in all my daily activities." "More aware and present." "When difficult situations arise, I do not immediately react from old patterns." "When feelings come up, sometimes I just notice rather than judge." "Yoga has taught me to pay attention to the everyday, the process, the journey, rather than the destination."
d. <i>Use of breath/ stress management/ relaxation (n = 42)</i>	"I am calmer in stressful situations." "I can use the breathing techniques to enhance mood, change energy levels or energy type." "I am able to feel my emotions well up inside me and take a moment to stop, breathe, and compose myself...all thanks to yoga." "I am able to exude a calmness in the most stressful situations."
e. <i>In interpersonal relationships, work, social situations/ driving (n = 36)</i>	"When driving I practice non-violence to stay present and not get angry and frustrated." "When my boyfriend upsets me and I choose to be non-reactive." "My practice grounds me in my being and informs all my relationships." "I am more patient with my family." "Ability to remain unruffled and cheerful at work." "Motherhood."
f. <i>Other physical activities (n = 3)</i>	"Yoga has helped with the mind/body connection in Spinning [stationary bike]." "I use the strength for lifting heavy patients."
g. <i>Other (n = 2)</i>	"Just as you do not overdo your poses, you do not overeat."

Table 6d. Open-Ended Questions

<p>Question 84: Please add any additional comments you think might be relevant.</p> <p>“I believe that every woman can have a healthy outlook about her body image when practicing the principles of yoga! We should all love our unique bodies for the strengths they bring to the world.”</p> <p>“Yoga has changed my life. It has allowed me to become more confident and more of who I am.”</p> <p>“I wish I was more attuned to my body—the more yoga I do, the more I feel that way.”</p> <p>“Yoga was and is life altering and saved my life and the way in which I relate to others and myself.”</p> <p>“I love yoga and it saved my life. I want to be a student of yoga for the rest of my life. I give thanks to the universe for giving me yoga because I am a better and more complete person because of it.”</p> <p>“I wish I had found yoga as a child. I think it is one of the best things I have ever done for myself.”</p> <p>“The women I see in my yoga classes are of various shapes, sizes and ages and you don’t see the low self-esteem or competitiveness you might find in other activities or social situations. I learn from it constantly. I will practice the rest of my life.”</p> <p>“Yoga has given me, much like religion does for many of the people in my life, something greater to believe in.”</p> <p>“Without yoga I would be spiritually adrift...”</p> <p>“I would probably be dead from heroin if not for yoga. I’ve always liked to put myself in ‘other states.’ There was a lot of chaos at home when I was young and yoga gave me tools so I could control something and go to a peaceful place.”</p>

The final four questions of the survey dealt specifically with weight and body image issues and eating disorders (e.g., “Have you ever struggled with weight or body image issues?” “Past or present, have you ever thought you might have an eating disorder?” “Have you ever sought treatment for an eating disorder?” “Are you in recovery from an eating disorder?”). Of the 157 cases analyzed, 118 (74%) responded

yes, they had experienced some weight or body image struggle at some point in their lifetime. Fifty-one respondents (32%) said they thought they might have had an eating disorder. There was no difference between groups regarding the lifetime weight or body image issues question ($\chi^2(1, N = 128) = 2.99, p > .05$) but there was a significant group difference in the eating disorder item ($\chi^2(1, N = 128) = 9.60, p < .01$). Only 10% of participants in the physical reasons group (3/29) said they might have had an eating disorder at one time while 41% of participants in the psychospiritual reasons group (41/99) said the same.

Discussion

Results indicate this sample of predominantly white, middle class, college educated women yoga practitioners with normal BMIs have above average levels (defined as above a score of 3 on measures) of body awareness, body responsiveness, intuitive eating, spiritual readiness, and body satisfaction. A unique but intended characteristic of this sample was that 48% of the women reported having attended yoga teacher trainings or advanced yoga courses and had practiced yoga for an average of 12.1 (± 9.21) years.

Results revealed several modest to moderate correlations among the five main variables, the strongest being positive associations between intuitive eating and body satisfaction as well as body responsiveness and body satisfaction (Table 5). A higher level of body responsiveness was moderately associated with greater body awareness and intuitive eating. Greater spiritual readiness was correlated with higher scores in body awareness, body responsiveness, and body satisfaction. A lower BMI was associated

with higher scores in body responsiveness, intuitive eating, and body satisfaction, but not body awareness. These results are consistent with previous research using similar variables (Daubenmeir, 2005; Tylka, 2006).

Intuitive eating was more highly correlated with body responsiveness than it was with body awareness, which is sensible because intuitive eating is more concerned with responding appropriately to the body's needs than noticing body sensations. Similarly, Daubenmier (2005) found that body responsiveness, but not body awareness, mediated the relationship between self-objectification and disordered eating. She also found that body responsiveness explained group differences in disordered eating between yoga practitioners and aerobic exercisers. Similarly, Tylka (2006) found intuitive eating to be negatively correlated with disordered eating attitudes.

In this study, although greater spiritual readiness was associated with higher scores in body awareness, body responsiveness, and body satisfaction across the sample, the latter three variables failed to differ significantly between physical- and psychospiritual-reasons groups. Further investigation is needed to determine if spiritual readiness or other factors not explored in this study play a role in body awareness, responsiveness, and satisfaction among women who practice yoga.

Participants were grouped based on responses to questions regarding reasons for practicing yoga. Those with strong psychospiritual reasons were placed in the psychospiritual reasons group and those with strong physical reasons but without strong psychospiritual reasons were placed in the physical reasons group. Those displaying no strong reasons in either category were dropped from further analyses. The two groups

differed with regard to yoga practices in ways that may have contributed to between-group differences in both spiritual readiness and reasons for practicing. For instance, the psychospiritual reasons group had a higher frequency of home practice. Self-guided practice may contain meditative and/or ritualistic elements not offered in groups. Perhaps a woman who possesses a high degree of spiritual readiness also chooses to practice postural yoga in her home where she can combine it with meditation and reflection. Moreover, spiritual and philosophical concepts may be less likely to be introduced at a gym, a place of practice more often frequented by women in the physical reasons group. For instance, one woman wrote that she would like to learn about the spiritual aspects of yoga not available at her gym.

Examples of open-ended questions about body image were “Have you ever struggled with weight or body image issues?” and “Since beginning your yoga practice, how has the way you feel about your body changed, if at all?” Written responses revealed that while 74% of women in this sample reported some degree of body image or weight related issue at some time in their lives, 75% reported increased body acceptance or appreciation after having developed a postural yoga practice. No relationship between number of years of previous practice and reported improvements in body image was found. The women also reported a high degree of current body satisfaction (“On the whole, I am satisfied with my body”); the average response was 3.9 (out of 5). Both body satisfaction and BMI trended higher in the group that practiced yoga for psychospiritual reasons even though a higher BMI was associated with lower levels of body satisfaction. This suggests that a woman who practices yoga for physical reasons

may have a lower BMI and she is also less satisfied with her body than a woman whose motivation for practicing yoga includes the psychospiritual.

The qualitative data from this study showed that women who practice yoga attribute their positive feelings and a sense of well being to yoga practice. Responses to the question “Since beginning your yoga practice, how has the way you feel about your place in the world or universe changed, if at all?” were overwhelmingly positive. Women expressed feeling a greater connection to themselves, to others, and to their notion of the divine, as well as more secure, and more purposeful since beginning their yoga practice. Other women said they felt more peaceful or grounded.

In response to the question “Are you able to apply any aspects of yoga to your life outside of class?” one woman wrote that yoga is a “way of life” and another wrote “the real yoga begins off the mat.” Other respondents indicated they were able to draw from lessons and metaphors learned during a postural yoga class to help them navigate difficult or stressful situations in daily life such as difficult relationships and driving in traffic.

Respondents emphasized that yoga is a practice. The word practice indicates the repeated performance of behaviors with some goal of improvement in mind. However, practice may also connote that one is perpetually in a state of practice without perfecting a goal. In letting go of the drive for perfection, one can more effectively focus on the present, which is important in yoga practice.

Aspects of yoga asana practice include careful attention to the present moment, observation of how the body feels, and what position the body is in. This kind of attention can be viewed as a form of mindfulness meditation, which is thought to lead to

acceptance (Baer et al., 2006). At first the yoga practitioner accepts her own practice and her physical limitations. Then perhaps acceptance can be applied to acceptance of the physical body, just as it is. This may help a woman rectify her desire for an ideal body or relinquish the goal of physical perfection. Thus, yoga may be a good way to learn non-judgmental observation and acceptance.

Patanjali's philosophy of yoga (Iyengar, 1993) offers instructions on the way to live one's life. Several respondents referred to the *yamas* and *niyamas* of yogic philosophy that are personal guidelines on how to live an ethical life, akin to Judeo-Christian virtues and commandments. Knowledge of *yamas* and *niyamas* is unlikely to be gleaned from the average yoga class. Because nearly half of the women in this study reported having taken an advanced studies or teacher-training course, it is likely this education was partly responsible for knowledge of yogic philosophy. Thus, one cannot infer from the data that attending regular postural yoga classes is sufficient to develop yoga into a true spiritual practice with all the purported benefits. Regular attendance, however, may confer a perceived benefit that sparks interest in further yogic study.

The final four survey questions asked about prevalence of disordered eating and body image disturbance, diagnosis, and treatment. In response to the question "Past or present, have you ever thought you might have had an eating disorder?" 32% of the participants indicated they may have had an eating disorder at some point in life with 7% expressing having a specific eating disorder. Most women who responded "yes" to this question felt they had struggled with some kind of subclinical level of disordered eating,

emotional eating, or a perceived addiction to food. The national estimate for the prevalence of eating disorders is 5% (ADA, 2001).

Only 27% of the participants rated themselves average or below in body satisfaction. In contrast, national estimates of self-reported body dissatisfaction are 60–80% (Garner, 1997). It is not known whether the practice of postural yoga helped improve body satisfaction in our sample.

The psychospiritual reasons group had a higher prevalence of lifetime possible eating disorders than the physical reasons group. It is well-documented that women of a certain temperament may be predisposed to eating disorders. It is possible that such women may also be drawn to the psychospiritual component of yoga as a way to manage body image issues. However, in this sample, women not motivated to practice yoga for psychospiritual reasons also had more positive body image than national averages. There is no way to know whether higher levels of body satisfaction in our sample, as compared to national averages for women, can be attributed to yoga. Women with body image issues have responded negatively to conventional exercise and thus might find yoga more appealing (White & Montell, 1996). White and Montell recommend such patients choose activities with rewards beyond weight control such as yoga for combating exercise resistance.

The high levels of positive body image and eating attitudes in our sample may have been influenced by age (47.4 ± 11.19). Most eating disorder research has been done on young women and adolescents and data show that these problems are highest in that age group. However, eating disorders are on the rise in older groups (Garner, 1997;

Gupta, 1994; Harris & Cumella, 2006). Some evidence shows that as a woman ages, her body shape concerns her less. This may be a function of changing priorities (Heatherton, Mahamedi, Striepe, Field, & Keel, 1997; Keel, Baxter, Heatherton, & Joiner, 2007; Landa & Bybee, 2007; Webster & Tiggemann, 2003). However some research suggests that in women whose body image worsens or does not improve, menopause and other physical signs of aging may be the culprit (Gupta, 1994; Harris & Cumella, 2006). Thus, it appears that although age may bring with it less preoccupation with body image for some women, older women are not immune to messages about youth and beauty.

Keel et al. (2007) proposed two factors that decrease levels of dieting and preoccupation with thinness among older women: finding a life partner and becoming a mother. If a woman views appearance as important while searching for a mate, finding the mate may relieve some women of the pressure for thinness. The role of motherhood may shift a woman's priorities and responsibilities making her weight seem less important. The present study did not query about significant relationships or children. Therefore, it is impossible to tell whether these factors influenced participant reports of high positive body image. Some participants indicated a third factor, a shift in importance from appearance to functionality of the body.

This study was limited by the method of group assignment. Some women with strong psychospiritual reasons for practicing yoga also emphasized compelling physical reasons for doing so. Thus, the true nature of group dispersion was presence or absence of psychospiritual reasons for practicing yoga. As the groups were sorted by this method, the sample size decreased appreciatively yielding a physical reasons group of only 30

subjects of the original 157 and leading to removal of data for 28 subjects who did not fit into either category. This group size reduced the statistical power of the results.

Questionnaires have several inherent defects; questions can be misinterpreted or misread. A small subset of the sample completed the paper questionnaire but modified its questions or amended responses. These cases were eliminated. These difficulties were not present in the online format. In addition, the questionnaire's length may have led to a skewed sample of avid yoga practitioners who enthusiastically completed the survey while potential subjects who were less dedicated may not have joined the study.

Although our sample was homogeneous in income, education, and ethnicity, it mirrors those who typically practice yoga. These same demographics tend to also describe disordered eating populations. Nearly 50% of respondents identified themselves as "qualified to teach yoga" and 11% indicated "yoga teacher" as their primary profession. Yoga-teacher-training programs offer a more in depth curriculum than might be found in a public yoga class and women who have undergone such training may have a deeper understanding of yoga philosophy and may practice all eight limbs of yoga. However, no significant differences were found between yoga teachers and non-yoga teachers on the five main variables (BA, BR, IE, SR, and BS). Analyses were not conducted to evaluate whether yoga teachers tended to practice for spiritual reasons compared to non-yoga teachers. The average number of practice years in this sample was 12 and there were not sufficient subjects to compare beginners (< 3 years of practice) with those with > 10 years of practice. There were also no data for pre-existing weight or

body image issues prior to yoga practice. Retrospective data collection presents the greatest limitation in design.

We hypothesized psychospiritual motivations for practicing would produce differences among variables that influence body image and disordered eating when compared to physical reasons for practicing. From the results, it appears psychospiritual reasons for practicing may not be responsible for high levels of body awareness, body responsiveness, intuitive eating, and body satisfaction in this sample of women who practice yoga. Other factors may be involved.

Study 2

The purpose of the second study was to gather additional information from participants about their experience practicing yoga and how yoga affected the way in which they relate to their bodies. Additional focus included perceived changes in spirituality since beginning yoga practice. The use of interviews was similar to that of Garrett (1996) to investigate the role of spirituality in recovery from anorexia nervosa.

Method

Participants. Eighteen women from the original sample from Study 1 volunteered to be interviewed. Their ages ranged from 23 to 62. No other demographic information was collected. Names have been changed to protect anonymity.

Procedure. Participants from Study 1 agreed to participate through email or by providing a first name and phone number on the final page of the questionnaire. Interviews were conducted by phone and recorded on a digital recording device and were anonymous and confidential. Each interview lasted approximately 20 minutes. No

identifying information could connect the interviewee to her original questionnaire. All interviews were conducted by the primary researcher in a non-scripted way to allow for variations in experience among interviewees.

Participants were asked to talk about their disordered eating and body image issues and development of their yoga practice. Depending on individual responses, participants answered questions about treatment experiences for these issues and childhood experiences that contributed to their development. If participants did not bring up spirituality on their own, they were asked about changes in spirituality since beginning yoga practice and how spirituality affected eating and body image attitudes. Additional questions were included as appropriate and participants made contributions outside the interviewer's line of questioning.

Results

Karen, a 24-year-old woman, has been practicing yoga regularly for 3 years. Her first yoga class was in the Bikram method, though now she mainly practices vinyasa/flow style. Karen's body image issues began in the fourth grade when she was teased for being tall, awkward, and having big feet. In her mind, being the tallest "least petite" girl in the class translated as "fat" and throughout her adolescence, she was on a constant quest to lose weight. "My self-worth relied on my weight," she says and in college it became even more skewed. "As soon as boys came into the picture, I was under the impression that it mattered even more what I looked like."

Several participants like Karen linked early episodes of teasing and objectification to later difficulties with dieting and eating behaviors. Shelly, now 59, remembers her

mother calling her a “stuffed sausage,” though she doubts that she was realistically overweight. These comments, she says, led her to a “dieting and excessive exercise lifestyle” that ultimately did not work. Mary, who is 26, recalls when she was 11, her grandmother commented, due to the way she was built, she would probably always have to watch what she ate. She began dieting from that day forward.

Not all women interviewed identified a specific incident serving as a trigger to body dissatisfaction. Kerry, 23, states she simply “never ate enough” and restricted from a very young age. Stacy, 62, remembers feeling “fat” as a kid. Sara describes “hitting puberty early” and gaining weight that stayed with her throughout adolescence. Like other women, Sara, 38, felt she had to look like images in fashion magazines: “tall, fit, and blond,” accelerating her drive for thinness. “There was a time when I thought that if I did the diet, took the pills, I could actually look like that,” she says. Shelly remembers growing up having feelings of failure, self-repulsion, and lack of control regarding weight, which fluctuated throughout her teens, 20s and 30s. “There was this ideal slimness and I was always veering off from it and just really, really hating that.” Karen recalls wanting to look like a Victoria’s Secret model echoing Sara’s certainty that it was possible under the right method.

Though many of these women had active lifestyles prior to discovering yoga, each agreed that yoga offered something different from other forms of exercise or dance. “Yoga draws you within,” says Shelly, “if it’s taught right, as yoga rather than exercise. It should draw you deeply within where there is self-acceptance and also awakening.” Similarly Wendy, who is 47 and suffers from anxiety disorder coupled with eating issues,

finds that yoga “pulls me down into my body” and is very grounding. Amy, 49, has been practicing yoga since high school. As a dance and physical education major in college, she remembers having some thoughts that maybe she should be thinner, but eventually those thoughts went away. “I like my body better and I’m taking care of and respecting my body more because I do yoga,” she says adding that yoga is a part of her life that she cannot do without. “It keeps my sanity,” she says.

Several of the women expressed being more accepting and less critical of their bodies after having developed a yoga practice. In Karen’s experience, “Yoga made me appreciate my body because you have to go inside in order to do it properly.” Kerry goes a step further saying her priorities changed with yoga from a focus on appearance to a focus on “being able to feel capable and healthy in my body and enjoy my practice, letting it be beautiful, strong, and graceful.” Sara has also learned to value function over aesthetics. “Yoga gives me a higher level of acceptance for what physically I have to work with,” she says. Karen says, “My body serves a different function than to just look pretty.”

Becky, 29, is in recovery from an eating disorder that landed her in the hospital at age 17. She identifies three areas in which yoga was instrumental to her continued recovery. First, she describes yoga is a safe alternative to running, which had been causing her joint and skeletal injuries. Second, yoga promoted a “friendly connection” to her body. “It blew away the Cartesian dualism,” she says. Third, yoga gave her a healthy sense of control over her body, which she had seen as “this out of control thing that needed to be tamed.” She discovered she could do things she could never do before,

like headstands and backbends. These discoveries led to “a sense of competency and efficacy in my body and power and accomplishment.” She also learned control over her emotions and gained a greater ability at mindfulness. “Before [yoga], it felt like one word would make me fall apart. Anything could knock me over,” she says adding, “Prozac helped a lot too.” Becky believes that if she had been introduced to yoga earlier on, her eating disorder may not have become as chronic.

A heightened sense of body awareness was a theme in many women’s lives from simply being conscious of posture or tension in the body, as in Linda’s case, or becoming more aware of feelings and sensations in the body. “I spent so much of my life judging myself and denying all feelings, good and bad,” says Sara. Through body awareness that comes with yoga, she says she has learned to identify physical sensations that accompany feelings and can work towards calming the mind and letting go of whatever it is that is bothering her. “Then I can address it and go deal with it,” she says. Lynn, 37, has a 10-year viniyoga practice that she came to in an effort to combat depression. She says that, unlike therapy, which she also found helpful, yoga offers the ability to be one’s own therapist 100% of the time by providing a place to go within the body where “you know you are going to be OK,” thus providing a measure of comfort and safety. What’s more, improvements in mood are self-generated, she says, which leads to confidence that one can take care of oneself and improved self efficacy.

Linda, who is 53, has learned tools through yoga to help cope with difficult emotions. “When I’m really upset, I come into awareness ...it’s really important for me to be connected to my body and be grounded... so when I get out of it I know what to do

to get back.” Linda developed a disconnection from her body after learning of her infertility many years ago. “Imagine a big hole from just above your pubic bone to under your ribs and someone rammed a big tree trunk through it,” she describes, saying that she felt like an alien, helpless. Yoga and other bodywork therapies such as massage helped her reconnect to her body. She says it took some time to become conscious of what she was holding in her body and how to correct it, “Like a turtle coming out of its shell.” Linda also practices Zen mindfulness meditation.

There is a sense among these women of increased active spirituality or at least openness to the possibility of a spiritual life. Kerry believes that yoga has helped her define a sense of purpose and reinforce the idea that “we all have a part of the divine within us, there is a reason we are all here and a reason you are in the moment you are in.” This belief encourages her to help others find their “dharma” or life path. Karen says her sense of spirituality was not developed before yoga. “I recognize that there is another dimension to me. Before, I was kind of a body walking on the Earth, the mind and body without a spirit. When I fed the body, I just fed my body and I wasn’t thinking about anything else. And when I did activities, I wasn’t thinking there was possibly another element that might be affected.” Similar to the way people’s lives change when they have children, she says, “I have an energetic body that I need to take care of too.” Jill, 49, says that before yoga and menopause, she never felt connected to her body and viewed her body as something sexual, to be adorned, and an object. Now she thinks of her body as “a house that I walk in...this is *my* body, not other people’s.”

Mary, who was a binge eater, found that her weight stabilized with a regular yoga practice along with making dietary and other lifestyle changes. She says now she loves her body, is completely at peace, and accepts her imperfections. She says she had been seeking a “spiritual answer” and yoga was the missing component. Like Karen, Mary felt “there was something in me that wasn’t being taken care of.” Melinda, 43, also has a history of binge eating that began after the death of her best friend. In addition to therapy and Overeaters Anonymous, both of which she says were helpful for providing accountability in a non-judgmental environment, Melinda says making the spiritual connection through yoga has helped her learn about herself and there is more to life than food and dealing with the death. “I’m not quite as judgmental,” she says regarding her body, “Not as hard. It’s OK to be a little overweight.” She is still in the process of losing weight, but is not as hard on herself emotionally along the way.

Ronda is 67 and has a ten-year Iyengar yoga practice. She says that she has had habitually negative comments about her body most of her life and through the movement of yoga, she is finding a way towards self-acceptance because there is no judgment in yoga. “It’s not the weight that changed, though I did lose weight, but how I related to my body that changed,” she says. “I realize I don’t have to be so harsh and yoga has helped with that because it’s not just physical,” she continues, alluding to yoga’s spiritual component. She says yoga has represented an in-depth exploration of beliefs and knowledge and thus she has become less judgmental in general and more tolerant of other people’s points of view.

Lynn describes her experience: “On my worst day, I can slow down and be and then remember that I don’t have to do this by myself and what I’m experiencing isn’t going to last forever and there is something so much more powerful and greater than me that is holding me all the time and I can only get to that place through yoga.” Erin, 35, who is in very recent recovery from anorexia nervosa has found the spiritual, meditative, and mindfulness practices used while connecting with the sensations in her body to be particularly helpful in her recovery. Her three-year practice began with Bikram yoga, in which, for her, the spiritual component was lacking. She has since moved on to explore other yoga methods.

Some practitioners did not take to the spiritual aspect right away. Jill has always stayed away from organized religion finding it “suspect” and “controlling”. Having grown up in a demanding and high-achieving household, this makes sense for her. It was yoga (and going through menopause) that initiated self-exploration causing her to reexamine her actions, especially in the raising of her son who is currently deployed in Iraq. “Yoga has given me the tools to be able to not only look at these issues I might not have looked at before, but also how to deal with them.” Though she may have done some things differently if given the opportunity, Jill is able to hold her former self in compassion saying, “I can’t throw her away, she is a part of me. I just want to take her into the future in a different way.”

Although two of the women expressed being Catholic, each denied having difficulty integrating yoga or other Eastern philosophies into their religion. Calling herself “eclectic,” Dierdre says she actively integrates the sitting, use of mantra, and

breathing qualities of yoga with her religious beliefs. She has also dabbled in Zen meditation. Liz, who is 40, was also raised Catholic and says she doesn't see a great conflict between Catholicism and Anusara yoga, which focuses on opening the heart. Liz believes we are all part of the divine and the body is the vehicle of being embodied in the world. Becky is Jewish and says, "Yoga is simpatico with the way that I view God."

One element of yoga that several women identified as helpful was the focus on the breath. For Liz, "Being in contact with the breath is my time to be with the divine and experience myself in my body as I am." Stacy, noting that breath can be visualized as energy, or *prana*, moving through the body, talks about learning to send the breath to different parts of the body to identify the different agitations, such as anxiety. In fact, she believes this practice has helped her understand emotions hidden beneath her hunger. Gwen, 53, agrees hunger is a "symptom of not being in touch with feelings." Growing up in a moderately dysfunctional household, Gwen entered a deprivation-binge cycle of eating as a teenager as a way to cope with her emotions. Later in life, after her mother's death, Gwen turned to yoga and meditation. It was then that she became fully aware of the pain she was in and began to deal with it. "When life has its challenges," she says, "I get up, take a shower, and do yoga. If I didn't have that, I don't know how I would manage."

Discussion

The 18 women interviewed expressed positive changes in attitudes towards eating and their bodies they attributed in part to both their postural yoga practice and a sense of spirituality that either grew from their practice or was compatible with their practice.

From their experiences, yoga appears to have benefited these women by improving both physical and emotional awareness, shifting body focus from appearance to functionality, grounding and stabilizing mood, and providing a method for introspection or spiritual growth. Emerging themes associated with women's yoga practice were reclaiming propriety of the body, rediscovering the body, as a functional unit, for example, respecting the body through appropriate diet and exercise, kindness towards the body through words and thoughts, and finding tools for transformation.

Results suggest that yoga may have the potential to help women with body image and eating disorders continue recovery, but the stage at which yoga should be introduced to be most beneficial remains unclear. The interviewed women seemed to have "found" yoga at a time appropriate for them, which may depend on several unknown factors such as maturity or spiritual seeking. Responses of these women also indicated yoga was not the sole method for recovery, but, in some cases, may have been introduced after preparation afforded by therapy or other interventions. The first Yoga Sutra of Patanjali (Bharati, 2007) indicates some preparation is required before beginning a yoga practice (*atha yoga anushasanam*: Now after having done prior preparation through life and other practices, the study and practice of Yoga begins; Bharati, 2007). The word *atha* conveys a sense of *now* and implies previous study has taken place leading to the commitment to undertake the present study at just the precise moment (Bharati, 2007). Therefore, it seems that Patanjali understood a certain amount of desire and commitment to the process of self-realization was required before beginning a yoga practice. It follows that an individual who has not yet begun the road to recovery may not be as receptive to yoga

as one who has begun the process of introspection. This possibility should be considered when introducing yoga early on in recovery. An additional caution with the use of yoga and eating disorders is that those in treatment often have restrictions on exercise and activity levels. Therefore, gentle yoga is indicated (Carei, 2007).

General Discussion

As a group, women yoga practitioners had above average levels of body awareness, body responsiveness, body satisfaction and intuitive eating. According to interviews and qualitative responses, women in this study reported improvements in body image, body satisfaction, and eating attitudes, which they attributed in part to yoga practice and associated spirituality. They also reported greater self-acceptance and appreciation of their bodies.

One objective of this study was to determine if spiritual reasons for practicing yoga contributed to increased body awareness, body responsiveness, intuitive eating, and body satisfaction. However, there were no group differences for these variables. A woman's reasons for practicing yoga, whether psychospiritual or physical, did not affect her scores on these measures. The individual interviews, however, indicated that spirituality was perceived as important to a woman's yoga practice and her recovery process. It was unclear how spirituality was fostered, whether by postural yoga practice or through additional methods such as meditation or outside influences.

Another factor may be responsible for the positive benefits of yoga on body image and eating attitudes. One avenue of future research is the role of stress reduction as a potential mediating factor in yoga's effects on body image and eating disorders.

Participants who practiced for psychospiritual reasons were more likely to have a home *asana* practice; therefore future research should consider incorporating self-guided yoga practice in addition to group classes. Several of the interview participants also indicated they often practiced alone. Additionally, yoga should be explicitly included in research on mindfulness and eating disorders. Continued investigation into yoga as a tool for recovery from body dissatisfaction and accompanying eating disorders is recommended.

References

- American Dietetic Association. (2001). Position of the American Dietetic Association: Nutrition intervention in the treatment of anorexia nervosa, bulimia nervosa, and eating disorders not otherwise specified (EDNOS). *Journal of the American Dietetic Association, 101*(7), 810–9.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders (4th ed.)*. Washington DC: American Psychiatric Association.
- American Psychiatric Association. (2006). *Practice guideline for the treatment of patients eating disorders (3rd ed.)*. Washington DC: American Psychiatric Association.
- Baer, R. A., Fischer, S., & Huss, D. B., (2005). Mindfulness-based cognitive therapy applied to binge eating: A case study. *Cognitive and Behavioral Practice, 12*, 351–358.
- Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment, 13*(1), 27–45.
- Bharati, J. (2007). Yoga sutras of Patanjali: Interpretive translation. Retrieved March 13, 2008 from <http://www.swamij.com/downloads.htm>.
- Carei, T.R. (2007). *Randomized controlled clinical trial of yoga in the treatment of eating disorders*. Unpublished doctoral dissertation, Seattle Pacific University, Seattle WA.
- Daubenmier, J. (2005). The relationship of yoga, body awareness, and body responsiveness to self-objectification and disordered eating. *Psychology of Women Quarterly, 29*, 207–219.
- Fairburn, C. G., Cooper, Z., & Shafran, R. (2003). Cognitive behaviour therapy for eating disorders: A “transdiagnostic” theory and treatment. *Behaviour Research and Therapy, 41*, 509–528.
- Frawley, D. (1998, August/September). On the road to enlightenment? Be prepared. *Yoga International, 20–25*.
- Fredrickson, B. L. & Roberts, T. (1997). Objectification theory: Toward understanding women’s lived experiences and mental health risks. *Psychology of Women Quarterly, 21*, 173–205.

- Fuller, R. C. (2006). *Wonder: From emotion to spirituality*. Chapel Hill: University of North Carolina Press.
- Garner, D. M. Olmstead, & M. A., Polivy, J. (1983). Development and validation of a multidimensional eating disorder inventory for anorexia nervosa and bulimia. *International Journal of Eating Disorders*, 2(2), 15–34.
- Garner, D. M. (1997). Survey says: Body image poll results. *Psychology Today*. Retrieved March 13, 2008, from <http://www.psychologytoday.com/articles/pto-19970201-000023.html>.
- Garrett, C. J. (1996). Recovery from anorexia nervosa: A Durkheimian approach. *Social Science & Medicine*, 43, 1489–1506.
- Gupta, M. A. (1995). Concerns about aging and a drive for thinness: A factor in the biopsychosocial model of eating disorders? *International Journal of Eating Disorders*, 18, 351–357.
- Harris, M., & Cumella, E. J. (2006). Eating disorders across the lifespan. *Journal of Psychosocial Nursing*, 44(4), 21–26.
- Hasselle-Newcombe, S. (2005). Spirituality and ‘mystical religion’ in contemporary society: A case study of British practitioners of the Iyengar method of yoga. *Journal of Contemporary Religion*, 20, 305–321.
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). *Acceptance and commitment therapy: An experiential approach to behavior change*. New York: Guilford Press.
- Heatherton, T. F., Mahamedi, F., Striepe, M., Field, A. E., & Keel, P. (1997). A 10-year longitudinal study of body weight, dieting, and eating disorder symptoms. *Journal of Abnormal Psychology*, 106, 117–125.
- Impett, E. A, Daubenmeier, J. J. & Hirschman, A. L. (2006). Minding the body: Yoga, embodiment, and well-being. *Sexuality Research and Social Policy*, 3(4), 39–48.
- Iyengar, B. K. S. (1993). *Light on the yoga sutras of Patanjali*. London: Harper Collins Publishers.
- Jacobs-Pilipski, M. J., Winzelberg, A., Wilfley, D. E., Bryson, S. W., & Taylor, C. B. (2005). Spirituality among young women at risk for eating disorders. *Eating Behaviors*, 6, 293–300.

- Keel, P. K., Baxter, M. G., Heatherton, T. F., & Joiner, T. E. (2007). A 20-year longitudinal study of body weight, dieting, and eating disorder symptoms. *Journal of Abnormal Psychology, 116*, 422–432.
- Kim, K. H. (2004). Religion, body satisfaction and dieting. *Appetite, 46*, 285–296.
- King, M., Jones, L., Barnes, K., Low, J., Walker, C., Wilkinson, S., Mason, C., Sutherland, J., & Tookman, A. (2006). Measuring spiritual belief: Development and standardization of a beliefs and values scale. *Psychological Medicine, 36*, 417–425.
- Kristeller, J. L., Baer, R. A., & Quillian-Wolever, R. (2006). Mindfulness-based approaches to eating disorders. In Baer, R. (Ed.) *Mindfulness and acceptance-based interventions: Conceptualization, application, and empirical support*. San Diego, CA: Elsevier.
- Kristeller, J. L., & Hallett, B. (1999). An exploratory study of a meditation-based intervention for binge eating disorder. *Journal of Health Psychology, 4*, 357–363.
- Landa, C. E., & Bybee, J. A. (2007). Adaptive elements of Aging: Self-image discrepancy, perfectionism, and eating problems. *Developmental Psychology, 43*, 83–93.
- Lester, R. J. (1997). The (dis)embodied self in anorexia nervosa. *Social Science Medicine, 44*, 479–489.
- Linehan, M. M. (1993a). *Cognitive-behavioral treatment of borderline personality disorder*. New York: Guilford Press.
- McComb, J. J. R. & Clopton, J. R. (2003). The effects of movement, relaxation, and education on the stress levels of women with subclinical levels of bulimia nervosa. *Eating Behaviors, 4*, 79–88.
- McDonald, K. & Thompson, J. K. (1992). Eating disturbance, body image dissatisfaction, and reasons for exercising: Gender differences and correlational findings. *International Journal of Eating Disorders, 11*, 289–292.
- Miller, E. D. (2004). The development and validation of a new measure of spirituality. *North American Journal of Psychology, 6*, 423–430.
- Palmer, R. L., Birchall, H., Sadhana, D., Gatward, N., McGrain, L., & Parker, L. (2003). A dialectical behavior therapy program for people with an eating disorder: Description and outcome. *International Journal of Eating Disorders, 33*, 281–286.

- Polivy, J. & Herman, C. P. (1987). Diagnosis and treatment of normal eating. *Journal of Consulting and Clinical Psychology, 55*, 635–644.
- Polivy, J. & Herman, C. P. (2007). Is the Body the Self? Women and body image. *Collegium Antropologicum, 31*, 63–67.
- Safer, D. L., Telch, C. F., & Agras, W. S (2001). Dialectical behavior therapy adapted for bulimia: A case report. *International Journal of Eating Disorders, 30*, 101–106.
- Segal, Z. V., Williams, J. M. G., & Teasdale, J. D. (2002). *Mindfulness-based cognitive therapy for depression: A new approach to preventing relapse*. New York: Guilford Press.
- Smith, F. T., Hardman, R. K., Richards, P. S., & Fischer, L. (2003). Intrinsic religiousness and spiritual well-being as predictors of treatment outcome among women with eating disorders. *Eating Disorders, 11*, 15–26.
- Smith, M. H., Richards, P. S., & Maglio, C. J. (2004). Examining the relationship between religious orientation and eating disturbances. *Eating Behaviors, 5*, 171–180.
- Strelan, P., Mehaffey, S. J., & Tiggemann, M. (2003). Self-objectification and esteem in young women: The mediating role of reasons for exercise. *Sex Roles, 48*(1/2), 89–95.
- Tiggemann, M. & Kuring, J. K. (2004). The role of body objectification in disordered eating and depressed mood. *British Journal of Clinical Psychology, 43*, 299–311.
- Tiggemann, M. & Williamson, S. (2000). The effect of exercise on body satisfaction and self-esteem as a function of gender and age. *Sex Roles, 43*, 119–127.
- Tribole, E., & Resch, E. (1995). *Intuitive eating: A recovery book for the chronic dieter*. New York: St. Martin's Press.
- Tylka, T. L. (2006). Development and psychometric evaluation of a measure of intuitive eating. *Journal of Counseling Psychology, 53*, 226–240.
- Tylka, T. L. & Wilcox, J. A. (2006). Are intuitive eating and eating disorder symptomology opposite poles of the same construct? *Journal of Counseling Psychology, 53*, 474–485.
- Webster, J. & Tiggemann, M. (2003). The relationship between women's body satisfaction and self-image across the life span: The role of cognitive control. *The Journal of Genetic Psychology, 164*, 241–252.

White, F., & Montell, F. (1996). Identification and treatment of exercise resistance: A syndrome associated with eating disorders. *Women's Health Issues, 6*, 273–278.

Wiser, S., & Telch, C. F. (1999). Dialectical behavior therapy for binge-eating disorder. *Journal of Clinical Psychology, 55*, 755–768.

CHAPTER 3
SUMMARY AND RECOMMENDATIONS
REFERENCES

Discussion

Results indicate this sample of predominantly white, middle class, college educated women yoga practitioners with normal BMIs have above average levels (defined as above a score of 3 on measures) of body awareness, body responsiveness, intuitive eating, spiritual readiness, and body satisfaction. A unique but intended characteristic of this sample was that 48% of the women reported having attended yoga teacher trainings or advanced yoga courses and had practiced yoga for an average of 12.1 (± 9.21) years.

Results revealed several modest to moderate correlations among the five main variables, the strongest being positive associations between intuitive eating and body satisfaction as well as body responsiveness and body satisfaction (Table 5). A higher level of body responsiveness was moderately associated with greater body awareness and intuitive eating. Greater spiritual readiness was correlated with higher scores in body awareness, body responsiveness, and body satisfaction. A lower BMI was associated with higher scores in body responsiveness, intuitive eating, and body satisfaction, but not body awareness. These results are consistent with previous research using similar variables (Tylka, 2006; Daubenmeir, 2005).

Intuitive eating was more highly correlated with body responsiveness than it was with body awareness, which is sensible because intuitive eating is more concerned with responding appropriately to the body's needs than noticing body sensations. Similarly, Daubenmier (2005) found that body responsiveness, but not body awareness, mediated the relationship between self-objectification and disordered eating. She also found that

body responsiveness explained group differences in disordered eating between yoga practitioners and aerobic exercisers. Similarly, Tylka (2006) found intuitive eating to be negatively correlated with disordered eating attitudes.

In this study, although greater spiritual readiness was associated with higher scores in body awareness, body responsiveness, and body satisfaction across the sample, the latter three variables failed to differ significantly between physical- and psychospiritual-reasons groups. Further investigation is needed to determine if spiritual readiness or other factors not explored in this study play a role in body awareness, responsiveness, and satisfaction among women who practice yoga.

Participants were grouped based on responses to questions regarding reasons for practicing yoga. Those with strong psychospiritual reasons were placed in the psychospiritual reasons group and those with strong physical reasons but without strong psychospiritual reasons were placed in the physical reasons group. Those displaying no strong reasons in either category were dropped from further analyses. The two groups differed with regard to yoga practices in ways that may have contributed to between-group differences in both spiritual readiness and reasons for practicing. For instance, the psychospiritual reasons group had a higher frequency of home practice. Self-guided practice may contain meditative and/or ritualistic elements not offered in groups. Perhaps a woman who possesses a high degree of spiritual readiness also chooses to practice postural yoga in her home where she can combine it with meditation and reflection. Moreover, spiritual and philosophical concepts may be less likely to be introduced at a gym, a place of practice more often frequented by women in the physical

reasons group. For instance, one woman wrote that she would like to learn about the spiritual aspects of yoga not available at her gym.

Examples of open-ended questions about body image were “Have you ever struggled with weight or body image issues?” and “Since beginning your yoga practice, how has the way you feel about your body changed, if at all?” Written responses revealed that while 74% of women in this sample reported some degree of body image or weight related issue at some time in their lives, 75% reported increased body acceptance or appreciation after having developed a postural yoga practice. No relationship between number of years of previous practice and reported improvements in body image was found. The women also reported a high degree of current body satisfaction (“On the whole, I am satisfied with my body”); the average response was 3.9 (out of 5). Both body satisfaction and BMI trended higher in the group that practiced yoga for psychospiritual reasons even though a higher BMI was associated with lower levels of body satisfaction. This suggests that a woman who practices yoga for physical reasons may have a lower BMI and she is also less satisfied with her body than a woman whose motivation for practicing yoga includes the psychospiritual.

The qualitative data from this study showed that women who practice yoga attribute their positive feelings and a sense of well being to yoga practice. Responses to the question “Since beginning your yoga practice, how has the way you feel about your place in the world or universe changed, if at all?” were overwhelmingly positive. Women expressed feeling a greater connection to themselves, to others, and to their

notion of the divine, as well as more secure, and more purposeful since beginning their yoga practice. Other women said they felt more peaceful or grounded.

In response to the question “Are you able to apply any aspects of yoga to your life outside of class?” one woman wrote that yoga is a “way of life” and another wrote “the real yoga begins off the mat.” Other respondents indicated they were able to draw from lessons and metaphors learned during a postural yoga class to help them navigate difficult or stressful situations in daily life such as difficult relationships and driving in traffic.

Respondents emphasized that yoga is a practice. The word practice indicates the repeated performance of behaviors with some goal of improvement in mind. However, practice may also connote that one is perpetually in a state of practice without perfecting a goal. In letting go of the drive for perfection, one can more effectively focus on the present, which is important in yoga practice.

Aspects of yoga asana practice include careful attention to the present moment, observation of how the body feels, and what position the body is in. This kind of attention can be viewed as a form of mindfulness meditation, which is thought to lead to acceptance (Baer et al., 2006). At first the yoga practitioner accepts her own practice and her physical limitations. Then perhaps acceptance can be applied to acceptance of the physical body, just as it is. This may help a woman rectify her desire for an ideal body or relinquish the goal of physical perfection. Thus, yoga may be a good way to learn non-judgmental observation and acceptance.

Patanjali’s philosophy of yoga (Iyengar, 1993) offers instructions on the way to live one’s life. Several respondents referred to the *yamas* and *niyamas* of yogic

philosophy that are personal guidelines on how to live an ethical life, akin to Judeo-Christian virtues and commandments. Knowledge of *yamas* and *niyamas* is unlikely to be gleaned from the average yoga class. Because nearly half of the women in this study reported having taken an advanced studies or teacher-training course, it is likely this education was partly responsible for knowledge of yogic philosophy. Thus, one cannot infer from the data that attending regular postural yoga classes is sufficient to develop yoga into a true spiritual practice with all the purported benefits. Regular attendance, however, may confer a perceived benefit that sparks interest in further yogic study.

The final four survey questions asked about prevalence of disordered eating and body image disturbance, diagnosis, and treatment. In response to the question “Past or present, have you ever thought you might have had an eating disorder?” 32% of the participants indicated they may have had an eating disorder at some point in life with 7% expressing having a specific eating disorder. Most women who responded “yes” to this question felt they had struggled with some kind of subclinical level of disordered eating, emotional eating, or a perceived addiction to food. The national estimate for the prevalence of eating disorders is 5% (ADA, 2001).

Only 27% of the participants rated themselves average or below in body satisfaction. In contrast, national estimates of self-reported body dissatisfaction are 60–80% (Garner, 1997). It is not known whether the practice of postural yoga helped improve body satisfaction in our sample.

The psychospiritual reasons group had a higher prevalence of lifetime possible eating disorders than the physical reasons group. It is well documented that women of a

certain temperament may be predisposed to eating disorders. Such women may also be drawn to the psychospiritual component of yoga as a way to manage body image issues. However, in this sample, women not motivated to practice yoga for psychospiritual reasons also had more positive body image than national averages. There is no way to know whether higher levels of body satisfaction in our sample, as compared to national averages for women, can be attributed to yoga. Women with body image issues have responded negatively to conventional exercise and thus might find yoga more appealing (White & Montell, 1996). White and Montell recommend such patients choose activities with rewards beyond weight control such as yoga for combating exercise resistance.

The high levels of positive body image and eating attitudes in our sample may have been influenced by age (47.4 ± 11.19). Most eating disorder research has been done on young women and adolescents and data show that these problems are highest in that age group. However, eating disorders are on the rise in older groups (Garner, 1997; Gupta, 1994; Harris & Cumella, 2006). Some evidence shows that as a woman ages, her body shape concerns her less. This may be a function of changing priorities (Heatherton, Mahamedi, Striepe, Field, & Keel, 1997; Keel, Baxter, Heatherton, & Joiner, 2007; Landa & Bybee, 2007; Webster & Tiggemann, 2003). However some research suggests that in women whose body image worsens or does not improve, menopause and other physical signs of aging may be the culprit (Gupta, 1994; Harris & Cumella, 2006). Thus, it appears that although age may bring with it less preoccupation with body image for some women, older women are not immune to messages about youth and beauty.

Keel et al. (2007) proposed two factors that decrease levels of dieting and preoccupation with thinness among older women: finding a life partner and becoming a mother. If a woman views appearance as important while searching for a mate, finding the mate may relieve some women of the pressure for thinness. The role of motherhood may shift a woman's priorities and responsibilities making her weight seem less important. The present study did not query about significant relationships or children. Therefore, it is impossible to tell whether these factors influenced participant reports of high positive body image. Some participants indicated a third factor, a shift in importance from appearance to functionality of the body.

This study did not seek to measure spirituality objectively, rather to determine individual perception of this concept and a predisposition to wonder through the creation of a Spiritual Readiness scale. The respondents clearly expressed a conceptual difference between being "religious" and being "spiritual." It was not uncommon to find a woman ranking herself a one on the religiosity scale and a five on the spirituality scale. Concept of God overwhelmingly strayed from the traditional Judeo-Christian concept of a personal God to a more Eastern or syncretic idea of God as a life force or something inside all beings rather than "out there" (see Table 4).

The move of educated Westerners away from institutional religions to the search for a different truth supports this change in God concept (Campbell, 1978). This new mysticism forged in part by philosopher William James (1842-1910) continues to attract new devotees.

“William James was in many ways a prototype of modern individuals who yearn for a grand spiritual dimension to their lives yet feel alienated from conventional religious belief. He demanded a religious humanism. That is, a religious outlook that focused only on those ideas humans can know in full intellectual honesty and on what they can achieve through their own mental and emotional abilities” (Fuller, 2006; p. 69).

James was a pragmatist. “Pragmatism emphasizes that the human being is an embodied creature, rooted in the complexities of our natural situation, and that human consciousness and self-consciousness serve us as a means to understand and control our natural situation” (Campbell, 2007, p. 5). Patanjali, recognized as the author of the Yoga Sutras and living circa 200 BCE, may well have been an early pragmatist. While the *ashtanga yoga* outlined by Patanjali is a philosophical cousin to the more abstract and theoretical *Vedantic* tradition, this method takes advantage of external behaviors, such as the postural *asana* practice and the *yamas/niyamas* to promote the process of growth through a practical design (Rama, 1976).

The Yoga Sutras of Patanjali provide a technology for intellectual and emotional self-inquiry based on the idea that self-knowledge ultimately leads to truth and so appeals to the pragmatist. When practiced in the modern “real” world as opposed to an ashram or monastery, the seeker finds that following the yogic path provides techniques for managing day-to-day existence, relationships, and struggles much like familiar religious doctrines. There is evidence of this in the reports from the women in this study (see Tables 6a–d).

Fuller (2006) proposes that the biologically driven emotion of wonder underlies spirituality, defined vaguely as “a person’s motivation to align his or her life with some kind of ‘higher’ order of existence” (p. 2) Drawing from several scientific disciplines, philosophies, and eras, Fuller presents the position that humans are biologically evolved to experience the emotion of wonder for survival of the species and that wonder engages us to ponder the meaning of our existence in response to profound experiences of truth, beauty and vitality. Thus, he suggests wonder is a likely candidate for inciting spirituality in human beings.

Fuller makes four points that ring true regarding the reported spiritual experiences of yoga practitioners. Each point can be argued from the position that yoga and increased spirituality are linked due to the direct physical experience of wonder as an emotion cultivated in a ritualistic manner leading to new discoveries, personal growth and transformation that are interpreted by the practitioner as a spiritual experience and, in some cases, communion with the divine.

First, wonder is an emotion with biological roots that can be sensed within the body. As presented in the present study and others like it, yoga students have a heightened sense of body awareness and can often detect emotions as physical sensations in the body (see comments Table 6b). If wonder is indeed felt in this way, then perhaps some of the euphoria and inspiration experienced by some practitioners can be attributed to the sensing of the emotion wonder.

Second, wonder is ignited by the discovery of the new and novel. Several of the participants in this study reported encountering novel sensations during their yoga

practice, which may serve to ignite the emotion of wonder. These discoveries led many participants to new cognitive understandings of their relationship to their bodies and to contemplation of their relationship to self and others, which is congruent with Fuller's theory.

Third, religious rituals can be described as being designed to hold us in a state of wonder. Considering the results of the present study in which most subjects reported a high importance of ritual associated with their yoga practice (through the Spiritual Readiness Scale), it is plausible that the ritual practice of yoga serves to hold the practitioner in a state of wonder, which contributes to her belief in the divine.

Fourth, incitement of wonder leads to personal growth and transformation. The women in this study overwhelmingly reported feelings of connection and being part of a larger whole or divine plan. In addition, many reported improvements in their interpersonal relationships and outlook on life in general. Many reported increased feelings of compassion, empathy, or tolerance, all states associated with higher levels of growth and spirituality. Fuller (2007) points to philosopher and ethical theorist Martha Nussbaum's work on emotions (*Upheavals of Thought: The Intelligence of emotions*, 2001) noting that "wonder... enables humans to move beyond self-interest to recognize and respond to others in their own right" (Fuller, 2007; p. 41) Thus it is concerned with compassion and preserving the "integrity of life" beyond one's own self interest. Wonder, Fuller contends, may be the emotion that allows human beings to transcend egoism and begin to consider other's needs as important.

The contemporary philosopher Juan De Pascuale notes that it is perfectly possible to go through life never giving thought to meaning or purpose relevant to the cosmic whole (De Pascuale, 2003). Yet he points out that through wonder, we are pulled out of ordinary existence and forced to ask existential questions. “If attended to,” he writes, “the experience of wonder gives birth to self-examination and to a mindful awareness of the world. In time you come to know yourself as you have been and are—and this gives you the possibility of choosing *how* to be. Through the experience of wonder, we become true individuals and true citizens of the universe” (p. 49).

This study was limited by the method of group assignment. Some women with strong psychospiritual reasons for practicing yoga also emphasized compelling physical reasons for doing so. Thus, the true nature of group dispersion was presence or absence of psychospiritual reasons for practicing yoga. As the groups were sorted by this method, the sample size decreased appreciatively yielding a physical reasons group of only 30 subjects of the original 157 and leading to removal of data for 28 subjects who did not fit into either category. This group size reduced the statistical power of the results. Questionnaires have several inherent defects; questions can be misinterpreted or misread. A small subset of the sample completed the paper questionnaire but modified its questions or amended responses. These cases were eliminated. These difficulties were not present in the online format. In addition, the questionnaire’s length may have led to a skewed sample of avid yoga practitioners who enthusiastically completed the survey while potential subjects who were less dedicated may not have joined the study.

Although our sample was homogeneous in income, education, and ethnicity, it mirrors those who typically practice yoga. These same demographics tend to also describe disordered eating populations. Nearly 50% of respondents identified themselves as “qualified to teach yoga” and 11% indicated “yoga teacher” as their primary profession. Yoga-teacher-training programs offer a more in depth curriculum than might be found in a public yoga class and women who have undergone such training may have a deeper understanding of yoga philosophy and may practice all eight limbs of yoga. However, no significant differences were found between yoga teachers and non-yoga teachers on the five main variables (BA, BR, IE, SR, and BS). Analyses were not conducted to evaluate whether yoga teachers tended to practice for spiritual reasons compared to non-yoga teachers. The average number of practice years in this sample was 12 and there were not sufficient subjects to compare beginners (< 3 years of practice) with those with > 10 years of practice. There were also no data for pre-existing weight or body image issues prior to yoga practice. Retrospective data collection presents the greatest limitation in design.

We hypothesized psychospiritual motivations for practicing would produce differences among variables that influence body image and disordered eating when compared to physical reasons for practicing. From the results, it appears psychospiritual reasons for practicing may not be responsible for high levels of body awareness, body responsiveness, intuitive eating, and body satisfaction in this sample of women who practice yoga. Other factors may be involved.

As a group, women yoga practitioners had above average levels of body awareness, body responsiveness, body satisfaction and intuitive eating. According to interviews and qualitative responses, women in this study reported improvements in body image, body satisfaction, and eating attitudes, which they attributed in part to yoga practice and associated spirituality. They also reported greater self-acceptance and appreciation of their bodies.

One objective of this study was to determine if spiritual reasons for practicing yoga contributed to increased body awareness, body responsiveness, intuitive eating, and body satisfaction. However, there were no group differences for these variables. A woman's reasons for practicing yoga, whether psychospiritual or physical, did not affect her scores on these measures. The individual interviews, however, indicated that spirituality was perceived as important to a woman's yoga practice and her recovery process. It was unclear how spirituality was fostered, whether by postural yoga practice or through additional methods such as meditation or outside influences.

Another factor may be responsible for the positive benefits of yoga on body image and eating attitudes. One avenue of future research is the role of stress reduction as a potential mediating factor in yoga's effects on body image and eating disorders. Participants who practiced for psychospiritual reasons were more likely to have a home *asana* practice; therefore future research should consider incorporating self-guided yoga practice in addition to group classes. Several of the interview participants also indicated they often practiced alone. Additionally, yoga should be explicitly included in research

on mindfulness and eating disorders. Continued investigation into yoga as a tool for recovery from body dissatisfaction and accompanying eating disorders is recommended.

References

- American Dietetic Association. (2001). Position of the American Dietetic Association: Nutrition intervention in the treatment of anorexia nervosa, bulimia nervosa, and eating disorders not otherwise specified (EDNOS). *Journal of the American Dietetic Association, 101*(7), 810–9.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders (4th ed.)*. Washington DC: American Psychiatric Association.
- American Psychiatric Association. (2006). *Practice guideline for the treatment of patients eating disorders (3rd ed.)*. Washington DC: American Psychiatric Association.
- Baer, R. A., Fischer, S., & Huss, D. B., (2005). Mindfulness-based cognitive therapy applied to binge eating: A case study. *Cognitive and Behavioral Practice, 12*, 351–358.
- Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment, 13*(1), 27–45.
- Bharati, J. (2007). Yoga sutras of Patanjali: Interpretive translation. Retrieved March 13, 2008 from <http://www.swamij.com/downloads.htm>.
- Campbell, C. (1978). The secret religion of the educated classes. *Sociological Analysis, 39*, 146–56.
- Campbell, J. (2007). One hundred years of pragmatism. *Transactions of the Charles Pierce Society, 43*(1), 1–15.
- Carei, T. R. (2007). *Randomized controlled clinical trial of yoga in the treatment of eating disorders*. Unpublished doctoral dissertation, Seattle Pacific University, Seattle WA.
- Daubenmier, J. (2005). The relationship of yoga, body awareness, and body responsiveness to self-objectification and disordered eating. *Psychology of Women Quarterly, 29*, 207–219.
- De Pascuale, J. (2003, Spring). A wonder full life. *Notre Dame Magazine, 48–51*.
- Fairburn, C. G., Cooper, Z., & Shafran, R. (2003). Cognitive behaviour therapy for eating disorders: A “transdiagnostic” theory and treatment. *Behaviour Research and Therapy, 41*, 509–528.

- Frawley, D. (1998, August/September). On the road to enlightenment? Be prepared. *Yoga International*, 20–25.
- Fredrickson, B. L. & Roberts, T. (1997). Objectification theory: Toward understanding women's lived experiences and mental health risks. *Psychology of Women Quarterly*, 21, 173–205.
- Fuller, R. C. (2001). *Spiritual but not religious: Understanding unchurched America*. New York: Oxford University Press.
- Fuller, R. C. (2006). *Wonder: From emotion to spirituality*. Chapel Hill: University of North Carolina Press.
- Fuller, R. C. (2007). The wonder of it all: emotion and personal transformation. *Revision*, 29(2), 24–35.
- Garner, D. M. Olmstead, & M. A., Polivy, J. (1983). Development and validation of a multidimensional eating disorder inventory for anorexia nervosa and bulimia. *International Journal of Eating Disorders*, 2(2), 15–34.
- Garner, D. M. (1997). Survey says: Body image poll results. *Psychology Today*. Retrieved March 13, 2008, from <http://www.psychologytoday.com/articles/pto-19970201-000023.html>.
- Garrett, C. J. (1996). Recovery from anorexia nervosa: A Durkheimian approach. *Social Science & Medicine*, 43, 1489–1506.
- Gupta, M. A. (1995). Concerns about aging and a drive for thinness: A factor in the biopsychosocial model of eating disorders? *International Journal of Eating Disorders*, 18(4), 351–357.
- Harris, M., & Cumella, E. J. (2006). Eating disorders across the lifespan. *Journal of Psychosocial Nursing*, 44, 21–26.
- Hasselle-Newcombe, S. (2005). Spirituality and 'mystical religion' in contemporary society: A case study of British practitioners of the Iyengar method of yoga. *Journal of Contemporary Religion*, 20, 305–321.
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). *Acceptance and commitment therapy: An experiential approach to behavior change*. New York: Guilford Press.
- Heatherton, T. F., Mahamedi, F., Striepe, M., Field, A. E., & Keel, P. (1997). A 10-year longitudinal study of body weight, dieting, and eating disorder symptoms. *Journal of Abnormal Psychology*, 106, 117–125.

- Hill, P. C., and Pargament, K. I. (2003). Advances in the conceptualization and measurement of religion and spirituality. *American Psychologist, 58*, 64–74.
- Impett, E. A., Daubenmeier, J. J. & Hirschman, A. L. (2006). Minding the body: Yoga, embodiment, and well-being. *Sexuality Research and Social Policy, 3*, 39–48.
- Iyengar, B. K. S. (1993). *Light on the yoga sutras of Patanjali*. London: Harper Collins Publishers.
- Jacobs-Pilipski, M. J., Winzelberg, A., Wilfley, D. E., Bryson, S. W., & Taylor, C. B. (2005). Spirituality among young women at risk for eating disorders. *Eating Behaviors, 6*, 293–300.
- Keel, P. K., Baxter, M. G., Heatherton, T. F., & Joiner, T. E. (2007). A 20-year longitudinal study of body weight, dieting, and eating disorder symptoms. *Journal of Abnormal Psychology, 116*, 422–432.
- Kim, K. H. (2004). Religion, body satisfaction, and dieting. *Appetite, 46*, 285–296.
- King, M., Jones, L., Barnes, K., Low, J., Walker, C., Wilkinson, S., Mason, C., Sutherland, J., & Tookman, A. (2006). Measuring spiritual belief: Development and standardization of a beliefs and values scale. *Psychological Medicine, 36*, 417–425.
- Kristeller, J. L., Baer, R. A., & Quillian-Wolever, R. (2006). Mindfulness-based approaches to eating disorders. In Baer, R. (Ed.) *Mindfulness and acceptance-based interventions: Conceptualization, application, and empirical support*. San Diego, CA: Elsevier.
- Kristeller, J. L., & Hallett, B. (1999). An exploratory study of a meditation-based intervention for binge eating disorder. *Journal of Health Psychology, 4*, 357–363.
- Landa, C. E., & Bybee, J. A. (2007). Adaptive elements of Aging: Self-image discrepancy, perfectionism, and eating problems. *Developmental Psychology, 43*, 83–93.
- Lester, R. J. (1997). The (dis)embodied self in anorexia nervosa. *Social Science Medicine, 44*, 479–489.
- Linehan, M. M. (1993a). *Cognitive-behavioral treatment of borderline personality disorder*. New York: Guilford Press.

- McComb, J. J. R. & Clopton, J. R. (2003). The effects of movement, relaxation, and education on the stress levels of women with subclinical levels of bulimia nervosa. *Eating Behaviors, 4*, 79–88.
- McDonald, K. & Thompson, J. K. (1992). Eating disturbance, body image dissatisfaction, and reasons for exercising: Gender differences and correlational findings. *International Journal of Eating Disorders, 11*, 289–292.
- Miller, E. D. (2004). The development and validation of a new measure of spirituality. *North American Journal of Psychology, 6*, 423–430.
- Nussbaum, M. (2001). *Upheavals of thought: The Intelligence of Emotions*. Cambridge, England: Cambridge University Press.
- Palmer, R. L., Birchall, H., Sadhana, D., Gatward, N., McGrain, L., & Parker, L. (2003). A dialectical behavior therapy program for people with an eating disorder: Description and outcome. *International Journal of Eating Disorders, 33*, 281–286.
- Polivy, J. & Herman, C. P. (1987). Diagnosis and treatment of normal eating. *Journal of Consulting and Clinical Psychology, 55*(5), 635–644.
- Polivy, J. & Herman, C. P. (2007). Is the Body the Self? Women and body image. *Collegium Antropologicum, 31*, 63–67.
- Rama, S. (1976). *Yoga and psychotherapy: The evolution of consciousness*. Honesdale: Himalayan Institute Press.
- Safer, D. L., Telch, C. F., & Agras, W. S. (2001). Dialectical behavior therapy adapted for bulimia: A case report. *International Journal of Eating Disorders, 30*, 101–106.
- Segal, Z. V., Williams, J. M. G., & Teasdale, J. D. (2002). *Mindfulness-based cognitive therapy for depression: A new approach to preventing relapse*. New York: Guilford Press.
- Smith, F. T., Hardman, R. K., Richards, P. S., & Fischer, L. (2003). Intrinsic religiousness and spiritual well-being as predictors of treatment outcome among women with eating disorders. *Eating Disorders, 11*, 15–26.
- Smith, M. H., Richards, P. S., & Maglio, C. J. (2004). Examining the relationship between religious orientation and eating disturbances. *Eating Behaviors, 5*, 171–180.

- Strelan, P., Mehaffey, S. J., & Tiggemann, M. (2003). Self-objectification and esteem in young women: The mediating role of reasons for exercise. *Sex Roles, 48*(1/2), 89–95.
- Tiggemann, M. & Kuring, J. K. (2004). The role of body objectification in disordered eating and depressed mood. *British Journal of Clinical Psychology, 43*, 299–311.
- Tiggemann, M. & Williamson, S. (2000). The effect of exercise on body satisfaction and self-esteem as a function of gender and age. *Sex Roles, 43*, 119–127.
- Tribole, E., & Resch, E. (1995). *Intuitive eating: A recovery book for the chronic dieter*. New York: St. Martin's Press.
- Tylka, T. L. (2006). Development and psychometric evaluation of a measure of intuitive eating. *Journal of Counseling Psychology, 53*, 226–240.
- Tylka, T. L. & Wilcox, J. A. (2006). Are intuitive eating and eating disorder symptomology opposite poles of the same construct? *Journal of Counseling Psychology, 53*, 474–485.
- Webster, J. & Tiggemann, M. (2003). The relationship between women's body satisfaction and self-image across the life span: The role of cognitive control. *The Journal of Genetic Psychology, 164*, 241–252.
- White, F., & Montell, F. (1996). Identification and treatment of exercise resistance: A syndrome associated with eating disorders. *Women's Health Issues, 6*, 273–278.
- Wiser, S., & Telch, C. F. (1999). Dialectical behavior therapy for binge-eating disorder. *Journal of Clinical Psychology, 55*, 755–768.
- Zinn, H. P. (1980). Yoga: Mysticism for millions? *Journal of the Academy of Religion and Psychical Research, 3*, 127–133.

APPENDIXES

Appendix A: IRB Approval



San José State
UNIVERSITY

Office of the Provost
Associate Vice President
Graduate Studies & Research

One Washington Square
San Jose, CA 95192-0025
Voice: 408-924-2427
Fax: 408-924-2477

E-mail: gradstudies@sjsu.edu
http://www.sjsu.edu

To: Katherine Dittmann

From: Pamela Stacks, Ph.D.
Associate Vice President
Graduate Studies and Research

Date: May 29, 2007

The Human Subjects-Institutional Review Board has approved your request to use human subjects in the study entitled:

“The relationship of spiritual readiness to body awareness, body responsiveness, and eating behaviors in women who practice yoga”

This approval is contingent upon the subjects participating in your research project being appropriately protected from risk. This includes the protection of the anonymity of the subjects' identity when they participate in your research project, and with regard to all data that may be collected from the subjects. The approval includes continued monitoring of your research by the Board to assure that the subjects are being adequately and properly protected from such risks. If at any time a subject becomes injured or complains of injury, you must notify Dr. Pamela Stacks, Ph.D. immediately. Injury includes but is not limited to bodily harm, psychological trauma, and release of potentially damaging personal information. This approval for the human subject's portion of your project is in effect for one year, and data collection beyond May 29, 2008 requires an extension request.

Please also be advised that all subjects need to be fully informed and aware that their participation in your research project is voluntary, and that he or she may withdraw from the project at any time. Further, a subject's participation, refusal to participate, or withdrawal will not affect any services that the subject is receiving or will receive at the institution in which the research is being conducted.

If you have any questions, please contact me at (408) 924-2480.

cc. Marjorie Freedman, 0058

The California State University:
Chancellor's Office
Bakersfield, Channel Islands, Chico,
Dominguez Hills, East Bay, Fresno,
Fullerton, Humboldt, Long Beach,
Los Angeles, Maritime Academy,
Monterey Bay, Northridge, Pomona,
Sacramento, San Bernardino, San Diego,
San Francisco, San José, San Luis Obispo,
San Marcos, Sonoma, Stanislaus

Appendix B: Questionnaire

Part I: Yoga

For the purposes of this questionnaire, yoga practice is defined as *asana* practice, whether in a class at a studio, gym, home, or other venue.

1. For how long have you been practicing yoga (*asana*)?
 Number of years: _____, months (if less than one year): _____
2. Has your practice been continuous? Yes _____ No _____
3. How many times a week do you practice yoga (*asana*)?
 Number of times/week: _____
4. Where did you take your first yoga class?
 - a. In a private residence with a video, DVD, or TV program
 - b. In a private residence with an instructor
 - c. At a gym
 - d. At a designated yoga studio
 - e. At your place of employment
 - f. Other, please explain:
5. Since beginning your practice, where have you taken classes or practiced? (you may select more than one response)
 - a. In a private residence with a video, DVD, or TV program
 - b. In a private residence with an instructor
 - c. In a private residence, alone, no instructor
 - d. At a gym
 - e. At a designated yoga studio
 - f. At your place of employment
 - g. At a workshop or retreat
 - h. In a true ashram
 - i. In India, specifically
 - j. Other, please explain:
6. **Today**, which of the following best describes your **main mode** of practice? (select only one)
 - a. Private instruction
 - b. Group classes at a dedicated studio
 - c. Group classes at a gym
 - d. Alone, self-guided practice
 - e. With video/DVD/TV instruction
 - f. Other, please explain:
7. **Today**, which of the following do you use to **supplement** your main mode of practice at least once per week? (circle all that apply)
 - a. Private instruction
 - b. Group classes at a dedicated studio
 - c. Group classes at the gym
 - d. Alone, self-guided practice
 - e. With video/DVD/TV instruction
 - f. Other, please explain:

8. How often do you usually practice asana at home?
- I don't usually practice asana at home
 - Less than one hour a week
 - 1-2 hours a week
 - 3-5 hours a week
 - More than five hours a week

Please answer the following questions on a scale of 1 to 5, 1 being *Definitely not important* and 5 being *Definitely very important*.

9. How important were the following possible motivations for you when you FIRST began yoga?
- | | <i>Definitely Not
Important</i> | | <i>Somewhat
Important</i> | | <i>Definitely Very
Important</i> |
|---|-------------------------------------|---|-------------------------------|---|--------------------------------------|
| | 1 | 2 | 3 | 4 | 5 |
| a. I "felt better" after class | 1 | 2 | 3 | 4 | 5 |
| b. An alternative form of exercise | 1 | 2 | 3 | 4 | 5 |
| c. To achieve a certain body type | 1 | 2 | 3 | 4 | 5 |
| d. Complementing another physical activity | 1 | 2 | 3 | 4 | 5 |
| e. To deal with a specific physical problem | 1 | 2 | 3 | 4 | 5 |
| f. To deal with an emotional or psychological problem | 1 | 2 | 3 | 4 | 5 |
| g. To better deal with "aging" | 1 | 2 | 3 | 4 | 5 |
| h. For "self discovery" | 1 | 2 | 3 | 4 | 5 |
| i. For "spiritual development" | 1 | 2 | 3 | 4 | 5 |
| j. To improve strength | 1 | 2 | 3 | 4 | 5 |
| k. To improve flexibility | 1 | 2 | 3 | 4 | 5 |
| l. To improve balance | 1 | 2 | 3 | 4 | 5 |
| m. Because it was trendy | 1 | 2 | 3 | 4 | 5 |
| n. For meditation or pranayama | 1 | 2 | 3 | 4 | 5 |
| o. Not sure what my original motivations were | 1 | 2 | 3 | 4 | 5 |
| p. Other, please explain: _____ | 1 | 2 | 3 | 4 | 5 |

10. When considering why you continue to practice yoga, how important to you are the following aspects?

	<i>Definitely Not Important</i>		<i>Somewhat Important</i>		<i>Definitely Very Important</i>	
	1	2	3	4	5	
a. Physical exercise	1	2	3	4	5	
b. Physical strength	1	2	3	4	5	
c. Stretching/ flexibility	1	2	3	4	5	
d. I like how my body looks from doing yoga	1	2	3	4	5	
e. Working with the “energetic body”	1	2	3	4	5	
f. Restorative practice	1	2	3	4	5	
g. Stress management	1	2	3	4	5	
h. Help deal with the aging process	1	2	3	4	5	
i. Improving physical appearance	1	2	3	4	5	
j. Help managing a specific physical problem or medical condition	1	2	3	4	5	
k. Self-discipline	1	2	3	4	5	
l. Becoming aware of feelings	1	2	3	4	5	
m. Managing moods/ feelings	1	2	3	4	5	
n. Self-knowledge	1	2	3	4	5	
o. An aspect that could be considered spiritual	1	2	3	4	5	
p. An aspect that could be considered meditative	1	2	3	4	5	
q. To increase mindfulness	1	2	3	4	5	
r. My relationship with a specific teacher or teachers	1	2	3	4	5	
s. The religio-philosophical foundations of yoga	1	2	3	4	5	

11. If you could pick the one most important reason for practicing yoga, what would it be?

12. What level practitioner do you consider yourself? (Please select only one)

- Beginner: learning basic poses
- Intermediate beginner: good knowledge of basic standing poses
- Advanced beginner: learning inversions and backbends
- Intermediate: learning arm balances, increased endurance in poses
- Intermediate/advanced: learning subtleties of adjusting in poses, continued endurance
- Advanced: skilled at creating ease within poses, continued endurance

13. Which styles of yoga have you tried for **at least a 6-week period** (select all that apply)

- a. Iyengar
- b. Bikram
- c. Power yoga
- d. Flow/ Vinyasa
- e. No specific style
- f. Other styles (please list): _____

14. Which **one** style do you predominantly practice? _____

15. In your own words, please explain why you prefer the above style you have selected.

16. What is your age? _____ years

17. What is your height? ____ feet, ____ inches

18. What is your weight? _____ pounds

19. What is your cultural heritage? _____

20. What is your education level? _____

21. What is your profession? _____

Please answer the following questions on a scale of 1 to 5, 1 being *Not at all meaningful* and 5 being *I take this very seriously*.

22. Considering your regular group classes or private instruction (not personal home practice), how **meaningful** to you is each of the following?

	<i>Not at all meaningful</i>		<i>Neutral</i>		<i>I take this very seriously</i>	
	1	2	3	4	5	
a. Opening and/or closing chant of Om	1	2	3	4	5	
b. Invocation to Patanjali or other chant or mantra	1	2	3	4	5	
c. Setting an intention for class	1	2	3	4	5	
d. Dedication of practice to someone or something	1	2	3	4	5	
e. Brief meditation	1	2	3	4	5	
f. Pranayama (breathing exercises)	1	2	3	4	5	
g. Namaste following practice (hands in prayer, thank you)	1	2	3	4	5	
h. Savasana (corpse pose)	1	2	3	4	5	
i. Other sacred aspect of your practice	1	2	3	4	5	

Please explain: _____

23. If you have a personal home practice, do you practice any of the following rituals? (circle all that apply)

- a. Opening and/or closing chant of Om
- b. Invocation to Patanjali or other chant or mantra
- c. Setting an intention for practice
- d. Dedication of practice to someone or something
- e. Meditation, from any tradition
- f. Pranayama (breathing exercises)
- g. Namaste following practice (hands in prayer, thank you)
- h. Savasana (corpse pose)
- i. Other sacred aspect of your practice

Please explain: _____

24. Do you normally practice in front of a mirror whether or not you actually use it? Yes_____ No
_____ Sometimes_____

If no, go to question #26.

If yes or sometimes, which of the following best describes your experience with a mirror (select all that apply):

- a. A mirror is present and the instructor frequently asks students to check their alignment in the mirror.
- b. A mirror is present, but the instructor does not ask students to use the mirror.
- c. A mirror is present, but I don't use it because I rely on internal cues.
- d. A mirror is present, but I don't use it because I don't want to see myself.

25. If you use a mirror at least sometimes, how do you feel about it?

- a. The mirror is helpful for correcting alignment and seeing myself in the pose.
- b. Distracting

Please comment: _____

26. Do you compare yourself to other women in yoga class? (Please select only **one** response)

- a. Yes, so often that it bothers me
- b. Yes, to see if others can do a pose better
- c. Yes, to see if I am doing better than others
- d. Yes, I compare my body to other bodies
- e. Occasionally, it doesn't bother me
- f. I purposely try not to look at others during class
- g. No, this is not a problem for me

Please comment: _____

27. Are you qualified to teach yoga?

- a. No
- b. In training
- c. Yes

If you answered "Yes", please answer the following:

1. Number of years teaching experience: _____
2. Style or tradition taught: _____

Part II: The following questions pertain to your eating habits and body awareness

For each item, please circle the answer that best characterizes your attitudes or behaviors.

28. I try to avoid certain foods high in fat, carbohydrates, or calories.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

29. I stop eating when I feel full (not overstuffed).

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

30. I find myself eating when I'm feeling emotional (e.g., anxious, depressed, sad), even when I'm not physically hungry.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

31. If I am craving a certain food, I allow myself to have it.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

32. I follow eating rules or dieting plans that dictate what, when, and/or how much to eat.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

33. I find myself eating when I am bored, even when I'm not physically hungry.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

34. I can tell when I am slightly full.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

35. I can tell when I am slightly hungry.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

36. I get mad at myself for eating something unhealthy.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

37. I find myself eating when I am lonely, even when I'm not physically hungry.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

38. I trust my body to tell me when to eat.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

39. I trust my body to tell me what to eat.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

40. I trust my body to tell me how much to eat.
- | | | | | |
|-------------------|----------|---------|-------|----------------|
| 1 | 2 | 3 | 4 | 5 |
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
41. I have forbidden foods that I don't allow myself to eat.
- | | | | | |
|-------------------|----------|---------|-------|----------------|
| 1 | 2 | 3 | 4 | 5 |
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
42. When I'm eating I can tell when I am getting full.
- | | | | | |
|-------------------|----------|---------|-------|----------------|
| 1 | 2 | 3 | 4 | 5 |
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
43. I use food to help me soothe my negative emotions.
- | | | | | |
|-------------------|----------|---------|-------|----------------|
| 1 | 2 | 3 | 4 | 5 |
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
44. I find myself eating when I am stressed out, even when I'm not physically hungry.
- | | | | | |
|-------------------|----------|---------|-------|----------------|
| 1 | 2 | 3 | 4 | 5 |
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
45. I feel guilty if I eat a certain food that is high in calories, fat, or carbohydrates.
- | | | | | |
|-------------------|----------|---------|-------|----------------|
| 1 | 2 | 3 | 4 | 5 |
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
46. I think of a food as "good" or "bad" depending on its nutritional content.
- | | | | | |
|-------------------|----------|---------|-------|----------------|
| 1 | 2 | 3 | 4 | 5 |
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
47. I don't trust myself around fattening foods.
- | | | | | |
|-------------------|----------|---------|-------|----------------|
| 1 | 2 | 3 | 4 | 5 |
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
48. I don't keep certain foods in my house/ apartment because I think that I may lose control and eat them.
- | | | | | |
|-------------------|----------|---------|-------|----------------|
| 1 | 2 | 3 | 4 | 5 |
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

These next questions are concerned with your awareness of bodily sensations. Please consider the extent to which each statement is true about you in general.

	<i>Not at all true about me</i>		<i>Somewhat true about me</i>		<i>Very true about me</i>
	1	2	3	4	5
49. I am confident that my body will let me know what is good for me.	1	2	3	4	5
50. My bodily desires lead me to do things that I end up regretting.	1	2	3	4	5
51. My mind and my body often want to do different things.	1	2	3	4	5
52. I suppress my bodily feelings and sensations.	1	2	3	4	5
53. I "listen" to my body to advise me about what to do.	1	2	3	4	5
54. It is important for me to know how my body is feeling throughout the day.	1	2	3	4	5
55. I enjoy becoming aware of how my body feels.	1	2	3	4	5
56. When I'm walking, I deliberately notice the sensations of my body moving.	1	2	3	4	5
57. When I take a shower or bath, I stay alert to the sensations of water on my body.	1	2	3	4	5
58. I notice how foods and drinks affect my thoughts, bodily sensations, and emotions.	1	2	3	4	5
59. I pay attention to sensations, such as the wind in my hair or sun on my face.	1	2	3	4	5
60. I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.	1	2	3	4	5
61. I notice the smells and aromas of things.	1	2	3	4	5
62. I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow.	1	2	3	4	5
63. I pay attention to how my emotions affect my thoughts and behavior.	1	2	3	4	5
64. On the whole, I am satisfied with my body.	1	2	3	4	5

Part III: The following questions pertain to your spiritual beliefs

63. Which of these statements comes nearest to your own belief? (Please select **only one** answer)
- d. I believe in a God with whom I can have a personal relationship
 - e. I believe in an impersonal spirit or life force
 - f. I believe that God is something within each person, rather than something out there
 - g. I don't believe in any kind of God, spirit, or life force
 - h. I really don't know what to believe

64. Whether or not you go to a place of worship, to what extent would you say that you are a religious person? (circle the number that is most true about you)
- Not at all religious* 1 2 3 4 5 *Very religious*
65. Whether or not you think of yourself as a religious person, would you say that you have a spiritual life, something that goes beyond a merely intellectual or emotional life? (circle the number that is most true about you)
- Not at all spiritual* 1 2 3 4 5 *Very spiritual*
66. Do you often think about meaning and purpose to life?
- Yes
 - No
 - Not sure
67. Would you consider yourself affiliated with a particular religious tradition or movement? Yes _____
No _____
If yes, please state your affiliation: _____
68. Do you regularly practice any prayer or meditation associated with any tradition other than yoga?
Yes _____ No _____
If yes, please describe the practice _____
Please indicate how regularly you perform the above _____
69. Which **one** of the following paradigms best resembles your thoughts?
- More often, it seems my mind rules my body
 - More often, it seems my body rules my mind
 - My mind and body are separate and distinct entities
 - My mind and body work together, each informing the other
 - My mind and body are one and the same, a union of sorts
70. I have had an experience that could be described as sacred.
- Yes
 - No
 - Not sure
71. I have had an experience that could be described as mystical.
- Yes
 - No
 - Not sure
72. I have had an experience that could be described as religious.
- Yes
 - No
 - Not sure
73. I have had an experience that could be described as spiritual.
- Yes
 - No
 - Not sure
74. I have had an experience that could be described as gaining profound self-knowledge or insight.
- Yes
 - No
 - Not sure

Please answer the following questions on a scale of 1 to 5, 1 being *Definitely not important* and 5 being *Definitely very important*.

	<i>Definitely Not Important</i>		<i>Somewhat Important</i>		<i>Definitely Very Important</i>
	1	2	3	4	5
75. Seeking the sacred is important to me.	1	2	3	4	5
76. Seeking the mystical is important to me.	1	2	3	4	5
77. Seeking religion is important to me.	1	2	3	4	5
78. Seeking the spiritual is important to me.	1	2	3	4	5
79. Seeking greater self-knowledge is important to me.	1	2	3	4	5
80. The search for meaning is important to me.	1	2	3	4	5
81. The search for purpose is important to me.	1	2	3	4	5
82. Belief in “something bigger” than me is important to me.	1	2	3	4	5
83. Connecting to “something bigger” is important to me.	1	2	3	4	5

Please answer the following as open-ended questions:

84. Since beginning your yoga practice, how has the way you feel about your place in the world or universe changed, if at all?
85. Since beginning your yoga practice, how has the way you feel about your body changed, if at all?
86. What does mind/body connection mean to you, if anything?
87. Can you say that you experience a mind/body connection? If so, how do you experience it?
88. Please add any additional thoughts or comments you think might be relevant.

The next four questions can be answered simply (yes or no) or in detail.

89. Have you ever struggled with weight or body image issues?
90. Have you ever thought you might have an eating disorder?
91. Have you ever sought treatment for an eating disorder?
92. Are you in recovery from an eating disorder?

If you answered yes to any of the above 4 questions (89-92) and would be interested in contributing further to this research by talking about your experiences as they relate to your yoga practice, on the following page, please leave your **FIRST NAME ONLY** and a phone number or email address where you may be reached by the researcher. Please detach the final page so that your questionnaire remains anonymous. Interviews are completely confidential.

First name: _____

Phone: _____

Email: _____