Chapter 13
Body Dissatisfaction and Disordered Eating Among Jewish Women: The Role of Religious Orientation and Spiritual Well-Being

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Abstract Numerous psychological, cultural, and biological variables have been investigated in the etiology of eating disorders (EDs) and their risk factors such as body dissatisfaction and a preoccupation with weight and appearance. Despite its historical link to EDs, the role of religion has largely been ignored. Most studies investigating religious influences on ED symptoms use the terms religion and spirituality interchangeably and do not include Jewish women. Studies that have included Jewish women used a single variable (e.g., attendance at religious service) to measure religiosity, which does not adequately capture the nature of one's religious beliefs and practices. In a sample of 301 adolescent and young Jewish women, this study assessed participants' religious orientation and spiritual beliefs to elucidate the possible differential influences of these variables on body dissatisfaction and disordered eating. Results revealed that participants with an intrinsic religious orientation had consistently lower scores (indicating less pathology) on

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measures of body dissatisfaction and eating disturbance as compared to those with an extrinsic, pro-religious, or anti-religious orientation. High levels of spiritual well-being were moderately associated with lower levels of body dissatisfaction but showed no association with disordered eating. Overall, these findings suggest that having an intrinsic religious orientation may confer protection from eating and body image disturbance.

Introduction

The incidence of eating disorders (EDs) has increased dramatically in the United States, Europe, and other Western nations in recent decades [1–3]. As a result, numerous psychosocial, cultural, and biological variables have been investigated in an attempt to understand the etiology of EDs and their risk factors such as body dissatisfaction and a preoccupation with weight and appearance [4]. Despite its historical link to EDs, the role of religion as a possible developmental influence has received little scientific investigation.

The earliest documented cases of anorexia were associated with religious devotion, self-denial, and asceticism [1]. For example, throughout medieval Europe, food refusal was common among women and almost ubiquitous among female saints [5]. The ability to survive without any or with very little food was considered miraculous and a testament to the sanctity of these women and their actions [1]. After the medieval period, the phenomenon of surviving on little food for religious purposes remained common but was seen mainly in adolescent girls and younger women. By the 16th century, this phenomenon became known as "anorexia mirabilis"—a miraculous loss of appetite. Not until the mid-1800s was this condition widely recognized as a psychiatric illness [1].

It is clear that some women (within the Judeo-Christian tradition) historically have felt the need to deny themselves food and other physical pleasures in order to ensure spiritual or religious acceptance [6]. Modern research suggests that religion is an important variable to consider in ED development. For example, Joughin et al. [7] observed a direct relationship between symptoms of anorexia and religious devotion and an inverse relationship between symptoms of bulimia and religious devotion. Smith et al. [8] found that patients with anorexia reported feeling closer to God whereas patients with bulimia reported feeling estranged from God and religious practice. The authors concluded that this observation may be a result of those with anorexia feeling successful in controlling their impulses and transcending their physical needs, which is seen as a virtue in most religious traditions. On the other hand, those with bulimia may feel that they have succumbed to temptation through eating binges and therefore have failed in their quest for impulse control. Therefore, religious influences remain important variables to explore in an attempt to elucidate the etiology of EDs and their risk factors.

Jewish Women and Eating Disorders

The association between religious beliefs and ED symptoms may be especially important to examine among Jewish women. Historically, those of the Jewish faith have had a complex and intimate relationship with food. In addition to special foods associated with the Sabbath and other holidays, observant Jews adhere to strict dietary laws that govern virtually every aspect of food preparation and consumption [9]. While Judaism does not officially endorse asceticism or the denial of physical pleasures, abstaining from food and sex is often mandated as in the case of certain fast days, and can lead, especially among adolescents, to ambivalent feelings about physical needs.

Limited empirical as well as anecdotal evidence suggests that the incidence of EDs among Jewish women, and specifically orthodox Jewish women, is higher than in the general population in the United States [10–12].

Only a handful of studies, however, have focused on ED development among Jewish women, and results have been inconclusive with regard to whether Jewish religious beliefs serve as a protective or vulnerability factor. Gluck and Geliebter [13] found that secular Jewish women had higher rates of anorexic symptoms than their orthodox Jewish counterparts, presumably because of reduced media exposure and less emphasis on physical appearance among orthodox women. Latzer et al. [14] found that among modern orthodox high school girls in Israel, greater levels of religiosity were associated with lower levels of eating pathology. These studies suggest that an increased level of religious observance may be protective against the development of ED symptoms; however, they contradict several anecdotal reports of an inflated prevalence among orthodox women [13, 14]. It is noteworthy however, that these studies explored disordered eating rather than full blown eating disorders. Furthermore, as discussed below, existing studies may be limited by the way religious observance is conceptualized and employed methodologically.

Religious Orientation Versus Religious Observance

The inconsistent findings on the relationship between religion and EDs are similar to what is seen in the larger body of work investigating the relationship between religion and various health outcomes. In a comprehensive review article on the health benefits of religious beliefs [15], the only substantiated finding was that greater attendance at church and religious services was related to a decrease in all-cause mortality. This finding remained even after controlling for the possible behavioral factors associated with church going (i.e. individuals who attend church may have better health habits). There was also a marginally significant association between religious practice and blood pressure but this was greater for women than men. Results have been inconsistent in studies exploring the relationship between religion and cardiovascular disease or cancer [15].

A limiting feature of studies exploring EDs as well as those examining religion and general health outcomes, is that they view religion and religious beliefs as one-dimensional, often assigning a single variable (such as attendance at religious services or self-reported religious observance) as the measure of religiosity [15, 16]. In reality, there may be different types of religious attitudes or beliefs that impact health outcomes. Allport and Ross [17] were among the first to call attention to different types of devotion or religious experiences. In their investigation of religious orientation and personal prejudice, they distinguished between extrinsic and intrinsic religiosity, and designed the religious orientation scale to measure these concepts empirically. According to Allport and Ross, extrinsic individuals "use religion…to provide security, solace, sociability, distraction, status, and self-justification." "Intrinsic" individuals, on the other hand, "live their religion," and "having embraced a creed, the individual endeavors to internalize it and follow it fully" [17]. In other words, extrinsically motivated individuals tend to utilize religion for its social rewards while intrinsically motivated individuals rely on religious beliefs to guide important aspects of their lives. While these terms represent opposite poles, individuals usually fall along an intrinsic/extrinsic continuum, and often endorse a combination of intrinsic and extrinsic characteristics.

Employing a paradigm of religious orientation rather than just observance or behavior may yield a deeper understanding of individuals' underlying religious attitudes and beliefs. Particularly among orthodox Jews, who adhere to a variety of strict guidelines relating to food and other key aspects of life, religious orientation may be a more useful construct than self reported religious observance to investigate the association between religion and EDs. In other populations, religious orientation has been used to examine ED development in a handful of studies. Smith et al. [18] found that women characterized as intrinsically religious tended to have less ED pathology than those characterized as extrinsically religious. Additionally, individuals characterized as pro-religious (who endorsed both intrinsic and extrinsic items on the religious orientation scale), had the highest scores on ED and body image questionnaires. This relationship was observed in both clinical and non-clinical samples. Additionally, Forthun et al. [19] found that intrinsic religiosity decreased the likelihood of developing EDs among women considered to have family risk factors for eating disturbances. Not only was an intrinsic orientation protective in this situation, but extrinsic religiosity appeared to exacerbate these risk factors [19].

While these studies raise compelling issues about the nature of religious orientation and EDs, the samples consisted almost exclusively of individuals from Christian denominations. Thus, one of our goals was to extend this paradigm to Jewish women in order to assess the generalizability of this model and to elucidate the complex association between eating behaviors and religious orientation among Jewish women. We also sought to expand the repertoire of research tools available to study religious influences on EDs and general health given the inconsistencies in the existing literature.

Religiosity Versus Spirituality

A second flaw in the general literature on religion and health, which has implications for ED research, is the confounding of the terms religion and spirituality. In the majority of research studies, the independent variable is referred to as "religion/spirituality" as if they were a single entity. Researchers often aggregate religion and spirituality because of the difficulty in operationalizing and measuring each construct separately [16]. Practically speaking, one could argue that spirituality is experienced on a personal level and involves "transcendence" (e.g., of the physical or material world), while religion occurs on more of a social or public level and is associated with practice, religious ritual, or organized religion [16]. To our knowledge, research has not examined the role that spirituality plays in the development of disordered eating. Accurate clarification and measurement of these distinct concepts would be useful both theoretically and methodologically.

Therefore, an important goal of the current study was to distinguish between religious and spiritual beliefs in order to elucidate the possible differential influences of each on body dissatisfaction and disordered eating.

This study has two overall hypotheses. First, we hypothesize that Jewish women with an intrinsic religious orientation will have lower scores on measures of eating and body image disturbance than any other religious orientation group; conversely, those with an extrinsic religious orientation will have the highest scores of any group. Second, spirituality, as distinct from religion, has rarely been explored as a possible influence on ED development. We hypothesize that Jewish women with high levels of spiritual well-being will have lower scores on measures of eating and body image disturbance than those with low levels of spiritual well-being.

Method

Participants

Participants were 301 Jewish women from three educational settings (i.e., two universities and one high school) in the New York City boroughs of Brooklyn and Manhattan. These establishments were included based on their proximity to the principal investigator's institution and/or because the administrators gave approval for the study. Most participants (n = 185, 61.5 % of the total sample) were drawn from a public 4-year co-educational college that is part of a large city university system. A smaller percentage of participants (n = 43, 14.3 % of the total sample) were enrolled at a private, single-gender college that is also part of a larger university system. The remaining participants (n = 73, 24.3 % of the total sample) were students at a single-gender religious high school (i.e., "Yeshiva").

Procedure

Institutional Review Board approval for the study was received from the first author's main institutional affiliation. Data were collected from August 2006 through March 2007 by the principal investigator and several advanced undergraduate research assistants. All participants were informed that the study entailed completing a series of paper-and-pencil questionnaires that would take approximately 30–45 min on the topic of body image and eating disorders. Participation was completely voluntary and confidential, and informed consent was obtained from all participants.

College-Specific Procedures

The public 4-year college participants were introductory psychology students who received class credit or students recruited from various public sites across campus including the cafeteria, library, and café. With the permission of professors in the Psychology and Judaic Studies departments, participants also were recruited from various undergraduate courses. Individuals not receiving course credit were not compensated for their participation. Participants had the option of completing the questionnaires on campus or off site (in which case they would return the in an envelope provided by the investigators). The private college participants were psychology students who completed the questionnaires during class with the permission of professors familiar with the study. All students approached agreed to participate in the study.

High School-Specific Procedures

Several visits were made to the high school during which the principal investigator provided general background information to students and consent forms for parents of students under age 18 years. Students were assured that parental consent forms would be stored separately from questionnaires so that no identifying information would be visible. Potential participants also were informed that decisions about whether or not to participate would have no bearing on academic outcomes. On return visits by the principal investigator, parental consent forms were collected and questionnaires were distributed to students during free class periods, lunch times, and recesses. All students approached agreed to participate in the study.

Measures

Demographic Information

Participants reported their age, height, and weight (which was then used to calculate body mass index (BMI), calculated as kg/m^2), the gender composition of the high school they currently or previously attended (all-girls vs. coed) and amount of television viewed per week (in hours). Self-reported level of religious observance was measured by asking participants to choose from the following categories; Orthodox, Modern Orthodox, Conservative, Reform, Traditional and Non-Affiliated.

Eating Attitudes Test (EAT-26)

The EAT-26 is a widely used measure of disordered eating [20]. The abbreviated EAT-26, which was used in this study, consists of 26 items that form three subscales: Dieting, Bulimia/Food Preoccupation, and Oral Control. Response options include: "always," "usually," "often," "sometimes," "rarely," or "never." Responses are scored from 0 to 3, where answers of "sometimes," "rarely," and "never" = 0, "often" = 1, "usually" = 2, and "always" = 3. Scores range from 0 to 78 for the EAT-26 Total score, from 0 to 39 for the Dieting subscale, from 0 to 18 for the Bulimia subscale, and from 0 to 21 for the Oral Control subscale, with higher scores indicating a greater degree of disordered eating. The EAT has demonstrated high reliability and consistency and is considered an effective screening tool in both clinical and non-clinical populations [20, 21]. In the initial study, Cronbach alpha reliability was 0.90, 0.90, 0.84, and 0.83 for the EAT Total score, and the Dieting, Bulimia, and Oral Control subscales, respectively. Cronbach alpha reliability in this sample was 0.92, 0.86, 0.90, and 0.78 for the EAT Total score and the Dieting, Bulimia, and Oral Control subscales, respectively.

Body Shape Questionnaire (BSQ)

The BSQ is a 34-item scale that measures concerns about body shape and weight. An additional feature is questions specifically related to the experience of feeling fat, which is considered a risk factor for and primary characteristic of eating disorders [22]. Responses are scored on a 6-point Likert type scale with responses ranging from "never = 1" to "always = 6." Total scores on the BSQ range from 34 to 204, with higher scores indicating greater body dissatisfaction. Although exact values are not reported, the BSQ has demonstrated high internal consistency in previous studies [22]. Cronbach alpha reliability in this sample was 0.97.

Religious Orientation Scale (ROS)

The ROS is a 20-item scale that measures intrinsic and extrinsic religiosity and is among the most widely used tests of religious orientation [17]. Individuals considered intrinsic in their orientation are those who "live their religion," while extrinsic individuals are those who "use their religion." The intrinsic subscale consists of nine items and the extrinsic subscale consists of 11 items. In addition to the intrinsic/extrinsic distinction, two additional constructs emerged from the scale after its development and initial use. Unexpectedly, some individuals tended to agree with both intrinsic and extrinsic items and were labeled as indiscriminately pro-religious, whereas other individuals tended to disagree with both types of items and were labeled as anti-religious. Based on these findings, Allport and Ross [17] conceptualized a fourfold typology of religious orientation, which will be used throughout this paper. Cut-off scores on the intrinsic and extrinsic subscales were used to categorize individuals as high or low on each subscale [23]. Individuals scoring high on the Intrinsic subscale and low on the Extrinsic subscale were categorized as intrinsic, individuals scoring high on the Intrinsic and Extrinsic subscales were categorized as pro-religious, individuals scoring low on both subscales were categorized as anti-religious, and individuals scoring high on the Extrinsic and low on the Intrinsic subscale were categorized as extrinsic.

Scores on the ROS range from 20 to 100 for Total score, with lower values indicating a more intrinsic orientation and higher values indicating a more extrinsic orientation. It is important to note that the ROS is a measure of religious orientation or attitude and is not necessarily a reflection of level of observance. The ROS has demonstrated good Cronbach alpha reliability, ranging from 0.69 to 0.93, and has been widely used [23]. In this sample, Cronbach alpha reliability was 0.74, 0.80, and 0.62 for the Total scale, Intrinsic, and Extrinsic subscales, respectively.

Spiritual Well-Being Scale (SWB)

The SWB is a 20-item scale that assesses overall spiritual well-being and also is used as a general quality of life measure [24]. The SWB contains a 10-item subscale for religious well-being (RWB) that assesses well-being in terms of a particular religious affiliation or relationship with God. The second 10-item subscale measures existential well-being (EWB) in terms of an individual's fulfillment or meaning in life, independent of religion. The SWB is scored on a 6 point Likert-type scale with responses ranging from "strongly agree" = 1 to "strongly disagree" = 6. Total SWB scores range from 20 to 120 and from 10 to 60 for the RWB and EWB subscales. For the total SWB and each subscale, cut-off scores are provided for categorizing individuals as low, moderate, or high for each type of spiritual-well-being.

In previous studies, the SWB demonstrated high internal consistency and reliability across samples and has been shown to be an effective measure in various populations and across religious affiliations [24, 25]. In a study by Paloutzian and Ellison [24], Cronbach alpha reliability ranged from 0.89 to 0.94 (total SWB), 0.82 to 0.94 (RWB), and 0.78 to 0.86 (EWB). In this sample, Cronbach alpha reliability was 0.92, 0.92, and 0.86 for the total SWB, RWB, and EWB, respectively.

Beck Depression Inventory (BDI–II)

The BDI-II is one of the most widely used measures of depressive symptoms in both clinical and research settings [26]. While the full BDI-II consists of 21 items, we eliminated one item that related to sexual activity because it was deemed inappropriate for the high school participants. On the BDI-II, respondents choose one of four statements (for each of the items) that best describes their feelings over the past two weeks. Statements are scored from 0 to 3, with higher scores indicating higher levels of depressive symptoms. For the purposes of our study, total scores ranged from 0 to 60. The BDI-II has consistently demonstrated high reliability with Cronbach alpha reported at 0.93 [26]. Cronbach alpha reliability in this sample was 0.91.

State/Trait Anxiety Inventory for Children (STAI-C)

The STAI-C is a widely used measure of both state and trait anxiety. Although the instrument was designed to be used with children and adolescents, the authors agreed that this test was more appropriate for individuals in our sample than the adult version. As well, we decided to use only the trait anxiety scale (T-Anxiety), which measures relatively stable individual differences in anxiety proneness (i.e., differences between individuals in the tendency to experience anxiety states). The T-Anxiety scale consists of 20 items related to emotions and behaviors associated with anxiety. Responses include "hardly-ever" = 1, "sometimes" = 2, and "often" = 3. Total scores range from 20 to 60, with higher scores indicating higher levels of anxiety. While exact alpha values have not been reported, the STAI-C has demonstrated good reliability [27]. In this sample, Cronbach alpha reliability was 0.89.

Statistical Analyses

Analysis of variance (ANOVA) was used to compare group differences in demographic characteristics. We next examined the relationship of eating disorder symptoms to religious orientation and spiritual well-being. Separate ANOVAs were

used to evaluate differences for the independent variables of religious orientation and spiritual well-being. Dependent variables were the Eating Attitudes Test (EAT) and the Body Shape Questionnaire (BSQ). When appropriate, Least Significant Difference post hoc tests also were conducted. A second model used analysis of covariance (ANCOVA) and adjusted for the demographic variables of age, BMI, and self-reported religious observance (orthodox Jewish vs. non-orthodox Jewish); data collection site was included as a random effects variable. A third model used ANCOVA and adjusted for the demographic variables in model 2 as well as for depression (as measured by the BDI-II), anxiety (as measured by the STAI-C); data collection site was included as a random effects variable. As appropriate, variables were evaluated for skewness and those that were skewed were logarithmically transformed. SPSS version 15 (SPSS, 2006) was used for all analyses except for calculation of Cohen's d, which used the online Becker Effect Size Calculator [28].

Results

Participant Characteristics

There were no significant differences between participants at any of the data collection sites in terms of body mass index (BMI), $F(2,283) = 0.62$, $p = 0.54$, $\eta^2 = 0.004$, level of eating disturbance, $F(2,298) = 1.03$, $p = 0.36$, $\eta^2 = 0.007$, body image dissatisfaction, $F(2,298) = 0.78$, $p = 0.46$, $\eta^2 = 0.005$, or depressive symptoms, $F(2,298) = 1.19$, $p = 0.31$, $\eta^2 = 0.008$. There was a significant difference for anxiety between the public and private college participants that was controlled for in subsequent analyses, $F(2,298) = 3.13$, $p = 0.05$, $\eta^2 = 0.02$. The mean age of the total sample was 19.00 (SD = 2.42), the means and standard deviations for the Brooklyn College, private college and high school samples were 19.75 (2.00), 20.63 (1.89) and 16.18 (0.94) respectively. The mean body mass index (BMI), measured using self-reported height and weight, was 21.70 (SD = 2.94). The mean depressive symptoms score for the overall sample was 11.32 (SD = 8.86) and the mean anxiety score was 37.25 (SD = 8.13), both of which were below levels suggesting clinical concern. The majority of the sample (76.1 %; n = 229) reported being Orthodox or Modern-Orthodox Jewish, and were categorized as observant, whereas the remainder of the sample endorsed conservative, reform, traditional, non-affiliated, or "other" when questioned about their religious observance and were categorized as non-observant (20.6 %, n = 62).

Religious Orientation and Eating Disorder Symptoms

As shown in Table 13.1, ANOVAs were conducted with religious orientation as the independent variable and each total scale or subscale of the EAT and BSQ as the

Table 13.1 Influence of religious orientation on body dissatisfaction and eating disturbance

	Intrinsic M (SD)	Anti-religious M (SD)	Pro-religious M (SD)	Extrinsic M (SD)	ANOVA Model 1		ANCOVA Model 2		ANCOVA Model 3		
Variable	n = 130	n = 58	n = 66	n = 47	F	*p*	F	*p*	F	*p*	eta^2
EAT total	8.65 (11.26)	12.06 (14.60)	13.31 (14.23)	16.15 (16.20)	5.84	0.001	12.34	0.001	11.69	0.001	0.06
EAT dieting	5.40 (6.91)	8.02 (9.06)	8.35 (9.14)	9.49 (9.78)	3.78	0.01	7.37	0.007	5.53	0.02	0.04
EAT bulimia	1.35 (3.06)	2.14 (4.33)	2.50 (3.84)	3.13 (4.32)	4.49	0.004	12.50	<0.001	13.38	<0.001	0.04
EAT Oral control	1.89 (3.18)	1.90 (3.61)	2.45 (3.62)	3.53 (4.14)	4.45	0.004	3.09	0.11	3.51	0.08	0.04
BSQ total	75.91 (28.10)	83.49 (35.9)	94.00 (34.21)	92.22 (34.96)	6.15	<0.001	29.85	<0.001	10.58	0.002	0.06

Note M mean, *SD* standard deviation, *EAT* Eating Attitudes Test, *BSQ* Body Shape Questionnaire. All analyses for the Eating Attitudes Test (EAT) and its subscales used logarithmically transformed values to correct for skewness. Non-transformed mean and standard deviation values are presented for ease of comparison. Variables used as covariates for model 2 were: age, body mass index (BMI), level of observance (orthodox Jewish vs. non-orthodox Jewish). Variables used as covariates for model 3 were: age, body mass index (BMI), level of observance, depressive symptoms, and trait anxiety. Data collection site was entered as a random effects variable for both ANCOVA models

dependent variables. All ANOVAs were significant for religious orientation at or below the $p = 0.01$ level. Consistent with our hypothesis, an overall pattern of mean values existed for the intrinsic (lowest mean scores), anti-religious (next to lowest mean scores), pro-religious (next to highest mean scores), and extrinsic (highest mean scores) groups.

Post hoc comparisons for the total EAT score showed significant differences between the intrinsic and extrinsic groups ($p < 0.001$), intrinsic and pro-religious groups ($p = 0.01$), and the extrinsic and anti-religious groups ($p = 0.03$). For the EAT Dieting subscale, there were significant differences between the intrinsic and extrinsic groups ($p = 0.01$) and between the intrinsic and pro-religious groups ($p = 0.012$). For the EAT Bulimia subscale, there were significant differences between the intrinsic and extrinsic groups ($p = 0.001$), intrinsic and pro-religious groups ($p = 0.018$), and the extrinsic and anti-religious groups ($p = 0.046$). For the Eat Oral Control subscale, there were significant differences between the intrinsic and extrinsic groups ($p = 0.002$), the extrinsic and pro-religious groups ($p = 0.043$), and the extrinsic and anti- religious groups ($p = 0.001$). For the BSQ, there were significant differences between the intrinsic and extrinsic groups ($p = 0.01$), the intrinsic and pro-religious groups ($p < 0.001$), and the comparison between the pro-religious and anti-religious groups approached significance ($p = 0.07$). With the exception of the Oral Control subscale of the EAT, all results remained significant for both ANCOVA models. Data collection site was not significant in any of the models.

Spirituality and Eating Disorder Symptoms

Participants were categorized as being low, moderate, or high on each type of spiritual well-being. However, because the "low" groups had sample sizes of 2, 6, and 0 for the SWB, RWB and EWB respectively, they were eliminated and all analyses were conducted for those individuals categorized as either moderate or high on each type of well-being.

Spiritual Well-Being (SWB)

As shown in Table 13.2, for SWB, ANOVAs demonstrated significant differences only for the BSQ, $F(1,297) = 4.572$, $p = 0.033$, $d = 0.27$. Participants with moderate spiritual well-being had significantly higher scores on the BSQ than those with high spiritual well-being. This relationship remained significant when adjusting for demographic variables and for data collection site with ANCOVA in

Table 13.2 Influence of spiritual well-being on body dissatisfaction and eating disturbance

Spiritual well-being	Moderate M (SD)	High M (SD)	ANOVA Model 1		ANCOVA Model 2		ANCOVA Model 3		
Variable	n = 182	n = 117	F	*p*	F	*p*	F	*p*	*d*
EAT total	12.08 (14.08)	10.67 (13.14)	0.25	0.61	0.99	0.41	0.27	0.77	0.06
EAT dieting	7.46 (8.68)	6.8 (8.18)	0.08	0.78	1.13	0.37	0.48	0.63	0.03
EAT bulimia	2.18 (3.91)	1.8 (3.52)	0.28	0.60	0.53	0.53	0.15	0.86	0.06
EAT oral control	2.43 (3.69)	2.03 (3.36)	1.37	0.24	0.65	0.49	0.25	0.78	0.14
BSQ total	87.17 (34.40)	78.84 (30.36)	4.57	0.03	26.62	<0.001	0.37	0.69	0.26

Note M mean, *SD* standard deviation, *EAT* Eating Attitudes Test, *BSQ* Body Shape Questionnaire. All analyses for the Eating Attitudes Test (EAT) and its subscales used logarithmically transformed values to correct for skewness. Non-transformed mean and standard deviation values are presented for ease of comparison. Variables used as covariates for model 2 were: age, body mass index (BMI), and level of observance (orthodox Jewish vs. non-orthodox Jewish). Variables used as covariates for model 2 were: age, body mass index (BMI), level of observance, depressive symptoms, and trait anxiety. Data collection site was entered as a random effects variable for both ANCOVA models

model 2, but was no longer significant when also adjusting for mood variables with ANCOVA in model 3. Data collection site was not significant in any of the models.

Religious Well-Being

As shown in Table 13.3, there were no significant findings for RWB or any of the dependent variables.

Existential Well-Being (EWB)

As shown in Table 13.4, for EWB, ANOVAs showed significant differences only for the BSQ, $F(1,299) = 18.226$, $p < 0.001$, $d = 0.51$. Participants with moderate existential well-being had significantly higher scores on the BSQ than those with high existential well-being. This relationship remained significant when adjusting for demographic variables and data collection site with ANCOVA in model 2, but was no longer significant when also adjusting for mood variables with ANCOVA in model 3. Data collection site was not significant in any of the models.

Table 13.3 Influence of religious well-being on body dissatisfaction and eating disturbance

Religious well-being	Moderate M (SD)	High M (SD)	ANOVA Model 1		ANCOVA Model 2		ANCOVA Model 3		
Variable	n = 154	n = 141	F	*p*	F	*p*	F	*p*	*d*
EAT total	11.25 (12.67)	11.41 (14.45)	0.21	0.64	1.46	0.31	0.42	0.67	0.05
EAT dieting	6.99 (7.91)	7.14 (8.82)	0.01	0.91	0.82	0.39	0.47	0.63	0.01
EAT bulimia	1.90 (3.50)	2.04 (3.82)	0.01	0.92	0.23	0.66	0.12	0.89	0.01
EAT oral control	2.35 (3.46)	2.23 (3.72)	0.60	0.43	0.30	0.61	0.93	0.41	0.09
BSQ total	85.39 (33.31)	81.35 (31.86)	1.12	0.29	5.19	0.06	1.26	0.29	0.12

Note M mean, *SD* standard deviation, *EAT* Eating Attitudes Test, *BSQ* Body Shape Questionnaire. All analyses for the Eating Attitudes Test (EAT) and its subscales used logarithmically transformed values to correct for skewness. Non-transformed mean and standard deviation values are presented for ease of comparison. Variables used as covariates for model 2 were: age, body mass index (BMI), and level of observance (orthodox Jewish vs. non-orthodox Jewish). Variables used as covariates for model 3 were: age, body mass index (BMI), level of observance, depressive symptoms, and trait anxiety. Data collection site was entered as a random effects variable for both ANCOVA models

Table 13.4 Influence of existential well-being on body dissatisfaction and eating disturbance

Existential well-being	Moderate M (SD)	High M (SD)	ANOVA Model 1		ANCOVA Model 2		ANCOVA Model 3		
Variable	n = 179	n = 122	F	*p*	F	*p*	F	*p*	*d*
EAT total	12.62 (14.19)	9.84 (12.76)	2.61	0.11	1.41	0.35	0.08	0.81	0.19
EAT dieting	7.94 (8.90)	6.09 (7.67)	2.48	0.12	2.10	0.27	0.12	0.75	0.19
EAT bulimia	2.20 (3.88)	1.79 (3.56)	1.00	0.32	0.57	0.52	0.34	0.60	0.12
EAT oral control	2.48 (3.72)	1.97 (3.28)	2.26	0.13	1.41	0.35	0.60	0.50	0.17
BSQ total	90.56 (33.76)	74.47 (29.49)	18.23	<0.001	56.00	<0.001	1.67	0.20	0.51

Note M mean, *SD* standard deviation, *EAT* Eating Attitudes Test, *BSQ* Body Shape Questionnaire. All analyses for the Eating Attitudes Test (EAT) and its subscales used logarithmically transformed values to correct for skewness. Non-transformed mean and standard deviation values are presented for ease of comparison. Variables used as covariates for model 2 were: age, body mass index (BMI), and level of observance (orthodox Jewish vs. non-orthodox Jewish). Variables used as covariates for model 3 were: age, body mass index (BMI), level of observance depressive symptoms, and trait anxiety. Data collection site was entered as a random effects variable for both ANCOVA models

Discussion

Study results confirmed our hypotheses and revealed that religious orientation is strongly associated with body dissatisfaction and eating disturbance. Participants with an intrinsic religious orientation had consistently lower scores (indicating less pathology) on measures of body dissatisfaction and eating disturbance than participants with an extrinsic, pro-religious, or anti-religious orientation. Also, there was a moderate association between spiritual well-being and body dissatisfaction and eating disturbance.

Religious Orientation and ED Symptoms

We measured religious orientation using the religious orientation scale (ROS), which distinguishes between intrinsic and extrinsic religious orientations. Intrinsically oriented individuals tend to internalize and live their religious beliefs, while extrinsically oriented individuals tend to engage in religious activities because of the social rewards or motivators associated with these activities. Individuals classified as pro-religious endorse intrinsic and extrinsic items, and those classified as anti-religious tend to disagree with items from both domains. We assessed spirituality using the spiritual well-being scale (SWB), which distinguishes between different types of spirituality as being related to or distinct from religious practice. Consistent with our first hypothesis, participants categorized as having an intrinsic religious orientation as measured by the ROS, had lower scores on both the EAT (and its subscales) and the BSQ than participants categorized as extrinsic, pro-religious, and anti-religious. These findings remained significant after controlling for age, BMI, observance level, depression, anxiety and data collection site—and were consistent with results from previous studies, which did not include Jewish women [18, 19].

According to study results, it appears that internalizing one's religious beliefs is helpful in terms of the development of body image and eating disturbance as compared to having an extrinsic attitude. Extrinsically oriented individuals often focus on the social or external rewards that religious practice can provide and may be more outwardly focused on physical appearance. It is noteworthy that with the exception of the Oral Control subscale of the EAT, the extrinsic and pro-religious groups did not differ significantly from each other. Participants categorized as pro-religious endorsed both intrinsic and extrinsic items and scored similarly to those with an extrinsic orientation, suggesting that the deleterious effects of an extrinsic orientation may outweigh the protective effects of an intrinsic one. Interestingly, while the intrinsic group had the lowest scores on all EAT subscales and the BSQ, this group was often not significantly different from the anti-religious group, whose members tended to disagree with both intrinsic and extrinsic items. This suggests that perhaps as long as one does not actually endorse and extrinsic orientation, this too may be protective against body image and eating disturbance.

Studies of Jewish women that have found that an increased level of observance or orthodoxy is associated with lower levels of body dissatisfaction and eating disorders, have attributed religion's emphasis on the spiritual (as opposed to the physical) as the basis for this difference [13, 14]. Gluck and Geliebter [13] asserted that among Orthodox Jewish women, there is little emphasis on being thin and being successful outside the home, which may confer protection against body dissatisfaction. Furthermore, they argued that the rigidity of an orthodox lifestyle, which includes observing the Sabbath and dietary laws of Kashrut [9], may provide a feeling of control for its constituents, eliminating the need to use the body as a vehicle of control. While this may be true to some extent, it is likely an oversimplification of the values of orthodox Judaism. Among this population, exploration of religious orientation rather than observance appears to enhance understanding of the role that religion plays in ED development.

An issue not considered in previous empirical studies of orthodox Jewish women and body image is the extreme pressure within this community to enter into a socially desirable marriage at an early age [10, 11, 29, 30]. Even among segments of this population with limited exposure to media, ideas about what constitutes a "suitable" bride closely resemble unattainable beauty ideals portrayed in the mainstream media. In fact, some have observed that over the last decade, the acceptable weight for orthodox women of marriageable age has become thinner and thinner, while beauty ideals have become more rigid [10, 11]. Orthodox Jewish women not only are expected to conform to rigid appearance standards, but they also are expected to do so within the boundaries of Tzniut or modesty laws. Briefly, these laws prohibit women and girls over 12 years of age from exposing any skin above the elbows or knees as well as the chest area below the collarbone [31], and many women also cover the lower legs with stockings. While the essence of these laws is about modesty and self-respect, they often are rigidly enforced and may be misinterpreted by adolescent and young women. For example, they may serve to induce shame about one's body or sexuality. Furthermore, for many Orthodox girls, formal dating for marriage is the first real interaction with boys, and all physical and sexual contact is prohibited until after marriage [9]. Contrary to Gluck and Geliebter's assertion that this rigid lifestyle provides a sense of control, many young women have reported feeling extremely "out of control" as a result of orthodox Jewish tenets; these women may use their bodies in unhealthy ways (e.g., food restriction or bingeing) as a way to express uncomfortable or shameful feelings [10, 29].

In the context of the values and standards reported above, orthodox Jewish women may feel even more pressure than their secular counterparts to conform to a thin-ideal. This is where the distinction between an intrinsic and extrinsic orientation becomes crucial and is more useful than the simple distinction between observant versus non-observant or orthodox versus non-orthodox. As suggested by our findings, participants with an extrinsic orientation towards religion, who are concerned primarily with its social aspects, may be more outwardly focused on physical appearance, especially as it relates to community pressures. By contrast, intrinsically oriented individuals may be better able to distinguish societal pressures

from religious values. These women may in fact be the ones who are protected by Orthodox Judaism's values, whereas women with an extrinsic orientation may be more vulnerable to body dissatisfaction and eating disturbance. In this regard, religious orientation is a more appropriate paradigm for measuring religious attitudes among secular and observant women alike. It is possible that the element of increased religiosity that appears protective in previous studies is actually intrinsic religiosity, as observed in the current study, rather than mere observance. With regard to Latzer et al. [14], it is possible that religiosity (or observance level) within Israeli society is more closely related to the idea of religious orientation than it is in the United States. While ED rates in Israel are comparable to those in the United States, cultural pressures within the orthodox community in Israel may be different than those in the United States. An expansion of the paradigm of religious orientation to Israeli women may or may not yield a similar pattern of results. Replicating the current study within other Jewish communities and among clinical samples is necessary to fully understand the association between religious orientation and ED symptoms among Jewish women.

Spiritual Well-Being and ED Symptoms

An important study goal was to examine the influence of spirituality on eating disturbance as a distinct construct from religion. Spirituality may or may not be related to religious practice, as many individuals report being spiritual but not religious and vice versa [16]. The majority of research related to religion and health has used the terms "religion" and "spirituality" interchangeably and has failed to address the possibility that, as separate constructs, they may have differing degrees of influence on health outcomes including body image and eating disturbance. The spiritual well-being scale (SWB), which was used to measure spirituality in the current study, includes the subscales of religious and existential well-being (RWB and EWB). Religious well-being refers specifically to one's relationship with God and religious practice, whereas existential well-being refers to welfare independent of God or religion, and includes feelings of fulfillment and purpose in life. The two subscales can be combined to obtain a total SWB score.

Our results indicated that for the BSQ, participants who scored high on total SWB and EWB had significantly lower scores than those with moderate SWB and EWB, suggesting that higher levels of spiritual well-being may be protective against body dissatisfaction. These findings remained significant when controlling for demographic variables but were no longer significant after controlling for mood variables. There were no differences on the EAT or its subscales and no differences on any measure for RWB.

These findings highlight several important issues. First, a possible explanation for the finding of group differences on the BSQ but not the EAT, relates to the fact that the BSQ measures overall body dissatisfaction whereas the EAT measures

actual disordered eating. It is likely that many of our participants exhibited body dissatisfaction without having progressed to disordered eating behaviors. One might consider the BSQ a more cognitive measure of risk factors for EDs because it measures thoughts and self-perceptions, which likely become distorted prior to the development of disordered eating behaviors [32]. As such, individuals are likely to have elevated scores on measures of body dissatisfaction prior to having elevated scores on measures of eating disturbance. Therefore, in our non-clinical sample, one might expect to find greater variation in scores on the BSQ than on the EAT.

Second, statistically significant outcomes on measures of body dissatisfaction between those with moderate and high SWB and EWB disappeared after controlling for depression and anxiety. This is likely due to the nature of the spiritual well-being scale. Because the scale measures spiritual well-being, and not spirituality per se, it is likely that scores were related to mood variables such as anxiety and depression. Because individuals with high scores on measures of body dissatisfaction are also likely to have high scores on tests of anxiety and depression [3, 32], group differences may disappear after controlling for these variables. Overall, these findings suggest that the spiritual well-being scale may not be the most useful measure of spirituality when conducting psychological research or when utilizing participant groups in which psychopathology might be present, even at subclinical levels.

Lastly, there was no observed influence of RWB. One could argue that RWB, as assessed via the Spiritual Well-Being scale, is not a true measure of spirituality but rather a measure of how one perceives his or her relationship with God. When arguing that spirituality should be considered as distinct from religion, it follows that EWB is of greater interest than RWB because RWB may be more related to religiosity or observance than to spirituality. If this were the case, then one would expect RWB to be of little value in predicting eating disturbance, given our other findings (described above), which highlighted the limitations of using observance alone as a predictor of disordered eating. Thus, it makes sense that these results revealed significant differences only for total SWB and EWB—and researchers should bear in mind this potential limitation when designing future studies dealing with spirituality.

Study Limitations and Future Directions

Several study limitations warrant mention. As discussed above, the utility of the spiritual well-being scale may be limited. When looking at the influence of SWB on body dissatisfaction and eating disturbance, significant results disappeared after controlling for depression and anxiety, suggesting that the scale is measuring a construct closely related to these mood variables. Because it appears that the subscale of EWB most closely resembles the construct of spirituality as being distinct from religious practice, a possible option is to utilize this subscale exclusively in future studies. In order to understand fully whether spirituality

(as a separate construct from religion) influences ED symptomatology, additional spirituality measures should be utilized and/or developed.

The current study did not inquire about participants' marital status, which will be included in future studies. Given the emphasis placed on marrying at a young age within the orthodox community and the demands associated with it, a comparison of married versus non-married participants might yield important findings. It may be useful to include measures of personality, such as extraversion and neuroticism. Because these personality variables are associated with a variety of health outcomes [33], they may inform and/or impact both religious orientation and attitudes towards one's body.

Another future goal is to examine whether the paradigm of religious orientation extends to other religious and cultural groups as well as to other Jewish communities such as those in Israel. Results of this study are similar to those seen in previous research with a predominantly Christian sample [8]. If studies conducted among different religious groups and denominations continue to show that having an intrinsic orientation acts as a buffer for the development of ED symptoms, then religious orientation may emerge as an effective tool for measuring the influence of religion in ED development. Additionally, studies using religious orientation should be expanded to include boys and young men, whose rates of body image and eating disturbance have been steadily increasing [34]. Thus, religious orientation can be added to the general repertoire of research tools available to elucidate the etiology of EDs.

Study Implications

The rationale underlying the quest for a deeper understanding of ED development is to enable the successful design and implementation of interventions aimed at vulnerable populations. While members of the orthodox Jewish community may be resistant to discussing matters related to psychiatric illness [10, 29], it is nevertheless imperative to disseminate information that has the potential to protect young women from developing EDs. Over the last several years, some Yeshivas and Jewish day schools have begun to provide workshops and seminars aimed at prevention and early detection of eating disturbance [29], and incorporating information related to intrinsic and extrinsic orientations would add to these efforts. As well, parents and school administrations should be encouraged to engage in open dialogue about the messages that are being transmitted to young women regarding what determines self-worth. Arguably, the importance of marriage and children, which are at the core of Jewish values, can be emphasized in a way that does not detract from women's inherent value. Furthermore, community and educational efforts may be initiated to expand the image of what constitutes a "suitable bride." This could involve educational programs aimed at young women and men that reinforce healthy and realistic beauty standards. Ideally, school counselors and psychologists (who are knowledgeable about these and related study findings) would be involved in all of the endeavors described above.

Study findings also may be used to inform treatment. For example, an awareness of different religious orientations and their implications would be beneficial to clinicians working with patients who manifest eating disorders and body image disturbances. It may even be possible to design therapeutic and/or experimental interventions that challenge existing attitudes and encourage an intrinsic religious orientation. If successful, such efforts might exert a positive effect not only on body image and eating disturbance but on other mental health outcomes as well.

Conclusions

Merely using self-reported attendance at religious services or observance level is of little use in evaluating religion's connection with health. Without a sophisticated understanding of how individuals incorporate religious beliefs into their lives and what motivates them to do so, religion's true impact on real-world outcomes may be overlooked. It is hoped that the current study can serve as a starting point for such efforts. This study showed that having an intrinsic religious orientation is related to lower scores on measures of body dissatisfaction and eating disturbance and may confer protection from the internalization of unhealthy media ideals. It is reasonable to assume that the influences of religious orientation may extend to other mental and physical health outcomes. Using religious orientation as a means of understanding individuals' true religious attitudes can provide a mechanism by which to gain a more comprehensive understanding of how religion affects a variety of mental and physical health outcomes, including depression, happiness, coping, and recovery from illness.

Take home points

- Intrinsic religious orientation (the manner in which people are connected to their religious attitudes and faiths) is related to reduced body dissatisfaction and eating disturbance to a greater extent than extrinsic religious orientation (belonging to a religious community).
- Intrinsic religious orientation may protect from the internalization of unhealthy media ideals.
- It is reasonable to assume that the influences of religious orientation may extend to other mental and physical health domains in addition to EDs.
- Using religious orientation as a means of understanding the individuals' religious attitudes can assist in gaining a more comprehensive understanding of how religion may affect a variety of mental and physical health-related outcomes, including coping with illness and recovery from it.

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