Holy Anorexia: Eating disorders symptomatology and religiosity among Muslim women in the United Arab Emirates

Article in Psychiatry Research - December 2017
DOI: 10.1016/j.psychres.2017.11.082

5 authors, including:

Justin Thomas PhD, CPsychol.
Zayed University
29 PUBLICATIONS 133 CITATIONS
SEE PROFILE

Lily O'Hara
Qatar University
35 PUBLICATIONS 253 CITATIONS
SEE PROFILE

Ian M. Grey
Lebanese American University
50 PUBLICATIONS 724 CITATIONS
SEE PROFILE

Nayeefa Chowdhury
Khalifa University
15 PUBLICATIONS 25 CITATIONS
SEE PROFILE

Some of the authors of this publication are also working on these related projects:

Critique of the weight-centred health paradigm View project

Correlation between keystrokes dynamics and mental health status View project
Holy anorexia: Eating disorders symptomatology and religiosity among Muslim women in the United Arab Emirates

Justin Thomas\textsuperscript{b,}* , Lily O’Hara\textsuperscript{b}, Sabrina Tabboub-Schulte\textsuperscript{c}, Ian Grey\textsuperscript{a}, Nayeefa Chowdhury\textsuperscript{a}

\textsuperscript{a} Zayed University, Abu Dhabi, UAE  
\textsuperscript{b} Abu Dhabi University, Abu Dhabi, UAE  
\textsuperscript{c} American University of Sharjah, Sharjah, UAE

\section*{Article Info}

\textbf{Keywords:}  
Religion  
Eating disorder  
United Arab Emirates  
Muslim

\section*{Abstract}

There is a substantial body of literature reporting a negative association between religiosity and psychiatric symptoms. In the context of eating disorders, however, this relationship appears to be reversed. The few studies exploring the relationship between religiosity and eating disorders have mostly focused on the Judeo-Christian religious traditions in Western nations. The present study examines this relationship among Muslim college women from the United Arab Emirates (UAE). All participants (N = 1069) independently completed the religious commitment inventory (RCI-10) and the eating attitudes test (EAT-26). As hypothesised, there was a positive association between religiosity and eating disorders symptoms. Furthermore, those scoring above the EAT-26 cut-off reported significantly greater levels of religiosity. These findings suggest that heightened religiosity among young Emirati women may represent a vulnerability factor for eating disorders. Preventative initiatives in the UAE should consider focusing on religiosity.

\section*{1. Introduction}

All of the world’s major religions advocate eating in moderation and promote some form of dietary restrictions. Fasting, for instance, is a religious practice in Islam, Judaism and several Christian denominations (Gerber et al., 2015). Early case reports of psychogenic self-starvation tend to implicate excessive religiosity as a central feature of the phenomenon. Morton (2004) alludes to a form of anorexia nervosa in the medical literature dating back to 300 A.D., when ascetics reportedly starved themselves to death engaging in religiously motivated acts of renunciation.

Within Roman Catholicism, drawing on the writings of the desert fathers, gluttony was considered one of the seven cardinal sins. Gluttony’s corresponding heavenly virtue was abstinence (Lyman, 1989). Extreme abstinence (e.g. prolonged celibacy and fasting) is characteristic of a number of case studies that have, retrospectively, been described as anorexia mirabilis or holy anorexia (Bell, 1985). These cases, centring on pious women from the European medieval period, depict individuals who ostensibly renounce the world and engage in religious self-starvation. As one commentator describes it, “overcoming the flesh to achieve a triumph of the soul” (Nasser, 1997). Perhaps the best known of these holy anorexics is Catherine of Sienna, who is described as adopting an unusually extreme regime of abstinence/self-starvation and is also reported to have engaged in frequent bouts of self-induced vomiting (Bell, 1985). Catherine’s regular self-starvation resulted in emaciation and arguably contributed to her death at the relatively young age of thirty-three (Pitcock, 2014).

A significant difference, however, between the anorexic presentations of late antiquity and the European medieval period, is the absence of any discourse concerning an obsessive fear of weight gain (Huline-Dickens, 2000). Brumberg eloquently argues that:

“...in the earlier era (13th to 16th centuries) control of appetite was linked to piety and belief: the modern anorexic strives for perfection in terms of society’s ideal of physical rather than spiritual beauty.”

(Brumberg, 1988 p.7)

Anorexia’s apparent shifting symptomatology has been explained with reference to the idea of pathoplasticity. This is the argument that anorexia’s content and prevalence are profoundly influenced by prevailing sociocultural pressures (Russell, 1985). Much research has explored the centrality of weight phobia (see Habermas, 1996) and body image disturbance to the contemporary condition (see Legenbauer et al., 2014 for review). Far less attention, however, has been paid to examining the extent that religiosity may or may not continue to play a role.

There is a fairly broad consensus that religiosity is a multidimensional construct. Concerning the specific content of the multiple dimensions, however, there is far less agreement (Pargament, 1997). Consequently, attempts to measure religiosity vary broadly within the literature. In a seminal work in this

* Correspondence: Zayed University, Department of Psychology, Abu Dhabi PO BOX 144534, UAE.

\url{https://doi.org/10.1016/j.psychres.2017.11.082}

Received 31 March 2017; Received in revised form 16 October 2017; Accepted 27 November 2017
Available online xxx 0165-1781/©2017
area. Allport and Ross (1967) distinguished two broad religious orientations, namely, extrinsic and intrinsic religiosity. Extrinsic religiosity is defined as religious behaviour as a means to achieve some self-serving end, such as self-esteem or popularity. Conversely, intrinsic religiosity is viewed as an end in and of itself, a means to spiritual development or strengthening one’s relationship with a deity (Hunt and Merrill, 2013).

These ideas were operationalized as a self-report measure known as the religious orientation scale, the scale, its revisions and derivatives, remain widely used. An alternative, but similarly multifactorial, approach to religiosity, is that Glock and Stark (1966) who identified five dimensions of religious commitment: experiential, ideological, ritualistic, intellectual and consequential. Numerous other conceptualizations and related psychometrics exist (for review see Park, 2002). Despite this heterogeneity of conceptualization and measurement, most definitions and measures of religiosity capture something of the following three factors:

1. A sense of belonging to a particular denomination or creed.
2. The personal importance of religion/spirituality to the individual.
3. A level of commitment to praxis, for example, attendance at communal worship or observing obligatory fasts (Miller et al., 2012).

In the general context of psychopathology, religiosity – as broadly defined above - has consistently been found to be associated with better mental health status (Dew et al., 2008). More specifically, in the context of major depressive disorder, a meta-analysis spanning 147 independent studies, including a total of 98,975 participants, found a statistically significant inverse relationship between religiosity (variably defined and measured) and depression (Smith et al., 2003). Furthermore, a 10-year prospective longitudinal study found that baseline religiosity (assessed using a simple three-item self-report measure) was associated with a reduced risk of later-life depressive episodes, particularly for those deemed at high-risk based on having a parent with a history of depression (Miller et al., 2012). Beyond depression, studies exploring substance-related disorders also suggest a protective role for religiosity. A review of the religiosity-substance abuse literature concluded that the majority of well-conducted studies report lower levels of substance-related disorders with rising levels of religiosity (Moreira-Almeida et al., 2006). In a multi-faith study of 1837 Lebanese university students, it was found that alcohol use among Muslims, Christians and Druze, was inversely related to religiosity across the different faith groups (Ghandour et al., 2009).

The few empirical studies that have explored religiosity in the context of anorexia nervosa have tended to find that eating disorders symptoms are associated with greater religiosity. A study was undertaken among anorexia nervosa patients (N = 851), finding that weight loss was positively associated with the degree of importance individuals placed on their religion (Joughin et al., 1992). Similarly, a demographic analysis undertaken in North America among participants diagnosed with either anorexia or bulimia nervosa (N = 252) found higher rates of self-reported religious identification (Judaism and Catholicism) among patients, compared with rates occurring in the general population (Sykes et al., 1988).

In a smaller scale study, including an explicit measure of religiosity (based on a subset of religion related items from the Minnesota Multiphasic Personality Inventory), Wilbur and Colligan (1981) found that participants diagnosed with anorexia nervosa (N = 34) had significantly higher religiosity scores than their psychiatric control group counterparts. Another study, this time among German patients, also found a significant positive association between religiosity (as determined by self-reported denominational affiliation) and eating disorders (Jacoby, 1993). There are, however, at least two studies that report the opposite pattern. Doumit et al. (2015) found that intrinsic religiosity, measured using the religious orientation scale-revised (Gorsuch and McPherson, 1989), was significantly inversely associated with vulnerability to eating disorders among a multi-confessional sample of young women from Lebanon (N = 949). Similarly, this inverse relationship was also observed among Jewish middle school girls in Israel (N = 320), where greater religiosity was associated with lower rates of eating-disorders symptoms (Latzer et al., 2007). Furthermore, and most recently, a prospective nationwide study (N = 2825) failed to find any significant overall association between religiosity (assessed using the religious fundamentalism scale from the Minnesota Multiphasic Personality Inventory) and anorexia nervosa among young Finnish women (Sipila et al., 2017). Among other factors, Sipila et al. suggest that Finland is largely a Protestant nation that has rapidly secularised, resulting in a “moderate Protestant Christian religiosity” (p. 412), where fasting and asceticism are rare. They go on to suggest that other religious and cultural contexts may, indeed, identify religiosity as a risk-factor for Anorexia (Sipila et al., 2017).

Further research exploring the interplay between religiosity and eating psychopathology is required. The somewhat equivocal findings to date may reflect methodological or population (clinical vs. nonclinical) differences. Equally, they could reflect differences related to the societies or religious traditions within which the studies were undertaken. To date, no study has explored the relationship between religiosity and eating psychopathology among any of the Muslim communities of the Arabian Gulf region (Bahrain, Oman, Kuwait, Qatar, Saudi Arabia and the United Arab Emirates).

The Arabian Gulf region is home to Islam’s two holiest sites, and the official religion of all the Gulf States is Islam. In addition to state-level religious commitment, personal religiosity (belonging to, valuing and practicing an Islamic religious tradition) appears to be relatively high across the Gulf States too. For example, in a comparative cross-cultural study exploring aspects of religiosity among similarly aged Kuwaiti and US university students, Kuwaiti students reported significantly higher scores on a measure of intrinsic religious motivation (Abdel-Khalek and Lester, 2009). Furthermore, across the Gulf States, religious practice, to varying degrees, is woven into the fabric of modern daily life; for example, workplaces, educational institutions, shopping malls and even petrol stations will all have prayer rooms. On Fridays, Islam’s holy day, the streets in many Gulf neighbourhoods become congested with people attending congregational prayers at local Mosques. Regular religious practice is unequivocally an important and widespread phenomenon in contemporary Arabian Gulf societies (Thomas, 2014). The relatively widespread religious practice in the Gulf States heightens the importance of exploring the relationships between psychopathology and religiosity in these nations.

The present study investigates the relationship between eating disorders symptoms and religiosity among college women, all of whom are Muslims and citizens of The United Arab Emirates (UAE). The UAE was formed as a federation of seven autonomous states in 1971, and due to the commercial exploitation of the nation’s large reserves of oil and gas, it has experienced unprecedentedly rapid socio-economic development (WHO, 2006). These rapid developments are thought to have given rise to acculturation among the youth, which in turn is viewed as contributing to an increased prevalence of eating disorders (Eapen et al., 2006). Previous research exploring eating pathology among the UAE’s citizens (Emiratis), unequivocally reports relatively high rates of eating disorders symptomatology. For example, using the EAT-26, a widely applied eating disorder screening tool, one study found that 25% of participants (college women) scored above the screening cut-off (Thomas et al., 2010). Several other studies confirm these relatively high levels of eating disorders symptomatology among Emirati females (O’Hara et al., 2016; Schulte and Thomas, 2013; Thomas, 2014). In the present study, based on previously mentioned findings in other nations, it is hypothesised that heightened Islamic religiosity will be associated with elevated levels of eating disorders symptomatology among Emirati college women. In line with Miller et al. (2012)’s broad conceptualization of religiosity, Islamic religiosity in the present study is defined as: (1) a sense of belonging to the Islamic faith, (2) a level of personal importance attached to Islam by the individual, and (3) a level of commitment to praxis, for example, performing Salah (formal prayer, undertaken 5 times each day).

2. Method

2.1. Participants

Female citizens (N = 1069) of the UAE were recruited from three universities within the Emirates (city states) of Abu Dhabi and Sharjah. All participants were bilingual in Arabic and English and the language of instruction at each institution is English. All participants provided informed consent prior to study commencement. The Institutional Review Board of the University of Sharjah approved the study (No. 18-111-2018). Participants were recruited through the recruitment processes of their respective universities.

2.2. Measures

Religiosity was measured using the Religious Orientation Scale (ROS) (Cox et al., 1990) which is a 12-item self-report scale assessing the participants’ level of religiosity across four domains: religiousness, religious sentiment, religious participation and religious attitudes.

2.3. Data Analysis

The data were analyzed using SPSS Version 22.0 (IBM Corporation, Chicago, IL, USA). Descriptive statistics were used to summarize the data. The Pearson correlation coefficient was used to determine the relationship between religiosity and eating disorder symptoms and eating disorder attitudes. The correlation coefficient was interpreted as follows: 0.00 to 0.39 = weak, 0.40 to 0.69 = moderate, 0.70 to 1.00 = strong.
rates College for Advanced Education (ECAE) and American University of Sharjah (AUS) prospectively approved the study (ZU15010F). The mean age of participants was 23.12 (SD = 4.62).

2.2. Measures

The measures of religiosity and eating disorders symptoms were presented in an online survey format open to students from the participating classes within the participating institutions. Both measures were presented in dual language form, with English and Arabic offered side by side on the same screen. Bilingual research assistants undertook the translation and independent back translation, with oversight by the authors of this paper.

2.2.1. Eating attitudes Test 26-item version (EAT-26) (Garner et al., 1982)

Eating disorder symptomatology was assessed using a dual language (English/Arabic) version of The EAT-26. An abbreviation (shortened version) of the EAT-40, this test was originally developed as an inventory of symptoms frequently observed in anorexia nervosa. The EAT-26 has been widely used to explore eating disorders symptoms in both clinical and non-clinical populations. As a screening tool for eating disorders it has a reported sensitivity of 90% when measured against a diagnostic interview based on DSM-IV criteria (Mintz and O’Halloran, 2000). The scale comprises 26 items scored on a 6-point Likert-type scale, allowing scores to range from 0 to 78. Higher scores are indicative of higher levels of abnormal eating attitudes and eating disorder symptoms, with a screening cut-off score of 20 used to identify individuals at risk of eating disorders (Park and Beaudet, 2007). Previous studies with Emirati samples have found the EAT-26 to be internally reliable and correlated, as expected, with depressive symptoms and body image dissatisfaction (Schulte and Thomas, 2013; Thomas et al., 2010). The internal reliability of the EAT-26 in the present study was good (α = 0.732). The scale can also be broken down into three subscales: dieting, bulimia & food preoccupation and oral control. In the present study the internal reliability for the three subscales were 0.818, 0.629, 0.588 respectively.

2.2.2. Religious Commitment Inventory—10 (RCI-10) (Worthington et al., 2003)

The Religious Commitment Inventory – 10 (RCI-10) is a 10-item measure of religious commitment designed for use across faith groups. The scale has two related subscales, intrapersonal (6 items) and interpersonal (4 items) religious commitment. Respective intra and inter personal items include: ‘I spend time trying to grow in understanding of my faith’ and ‘Religious beliefs influence all my dealings in life’. Responses to these items are scored on a 5-point gradient scale, with a score of 1 anchored to: ‘Not at all true of me’ and a score of 5 anchored to: ‘Totally true of me’.

Explorations of the RCI-10’s psychometric properties have demonstrated excellent internal reliability (α = 0.93) and good test-retest reliability, at three weeks (r = 0.87) and five months (r = 0.84). The scale was described as being particularly useful for assessing religious commitment in Christians, although there is less support for its use in other religions (Worthington et al., 2003). One previous study in the United Arab Emirates has used this RCI-10, where the scale demonstrated good internal validity (α = 0.79) and also predicted, as hypothesised, lower levels of depressive symptomatology (Thomas, 2016). The scale’s internal reliability in the present study was acceptable: α = 0.88 and α = 0.84 and 0.74 for inter and intra subscales respectively.

2.3. Procedure

A convenience sample of undergraduate students enrolled in health science or psychology courses at the participating institutions were invited to enroll in the study for course credit. After being informed about the general nature of the study and reminded that it was anonymous, consenting students used mobile computing devices to complete the RCI-10 followed by the EAT-26. Data were collected in a classroom setting and all participants were instructed to complete the questionnaires alone and in silence.

3. Results

The EAT-26 data were positively skewed which is to be expected with a measure of psychopathological traits. Around a third of participants 30.5% (N = 310) scored above the EAT-26 cut-off. Scores on the RCI-10 were negatively skewed, arguably reflecting a relatively high level of religious commitment among this Emirati Muslim sample. The mean score on the RCI was 36.94 (SD = 8.80), which is considerably higher than that reported for North American college students (N = 468, M = 22.8, SD = 10.5) by Worthington et al. (2003). Table 1 details the means and correlations for all of the study’s main variables.

Exploring the relationship between the EAT-26 subscales and religiosity revealed a noteworthy difference, specifically, only the dietary and oral control subscales were positively correlated with religiosity, the bulimia and food preoccupation subscale was actually inversely correlated with RCI-10 scores. All correlations were statistically significant*. See Table 2 for details.

A between groups analysis revealed that the religiosity of those scoring above the EAT-26 cut-off (N = 310, Mdn = 41) was higher than that of those scoring below the cut-off (N = 750, Mdn = 38). To account for the skewed distributions of both the RCI-10 and EAT-26, the non-parametric Mann Whitney test was used to explore group differences. Religiosity was significantly higher among those scoring above the EAT-26 cut-off with a small effect size (U = 91,660, p < 0.001, r = −0.12).

4. Discussion

The present findings suggest that religiosity is positively correlated with eating disorders symptoms among Muslim, Emirati, college women in the UAE. These findings support the majority of previous studies that have explored this question in other nations with different religious traditions. This finding also contradicts the recent study among 2825 Finnish women, which failed to find any association between anorexia and religiosity (Sipila et al., 2017). It might be that the particular importation attached to religion in UAE society renders this association discernable whereas, in highly secularised societies with relatively low levels of religiosity, such as Finland, such an association is harder to detect or non-existent. Even though religiosity and eating disorders symptoms were positively correlated among the young Muslim women in the present study, the cross-sectional and correlational nature of the study leaves us speculating about the possible temporal and causal dynamics of this relationship.

Table 1

<table>
<thead>
<tr>
<th></th>
<th>M (SD)</th>
<th>Age</th>
<th>RCI-10</th>
<th>RCI-Intra</th>
<th>RCI-Inter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>22.24</td>
<td>-0.02</td>
<td>0.00</td>
<td>0.00</td>
<td>-0.01</td>
</tr>
<tr>
<td>Eat-26</td>
<td>15.80</td>
<td>0.17</td>
<td>0.14</td>
<td>0.15</td>
<td>0.91</td>
</tr>
<tr>
<td>RCI-10</td>
<td>36.94</td>
<td>0.95</td>
<td>0.74</td>
<td>0.74</td>
<td></td>
</tr>
<tr>
<td>RCI-Intra</td>
<td>23.10</td>
<td>0.95</td>
<td>0.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCI-Inter</td>
<td>13.99</td>
<td>0.74</td>
<td>0.74</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes. N’s range from 1069 to 1052 due to occasional missing data. Eat-26 = eating disorders symptoms. RCI-10 = Religious commitment inventory. RCI-Intra = Intrapersonal subscale. RCI-Inter = Interpersonal subscale. *p < 0.001. All tests are one-tailed
Table 2

<table>
<thead>
<tr>
<th>Dieting</th>
<th>Bulimia</th>
<th>Oral</th>
<th>RCI-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dieting</td>
<td>0.20</td>
<td>0.12</td>
<td>0.07</td>
</tr>
<tr>
<td>Bulimia</td>
<td>0.16</td>
<td>0.07</td>
<td>0.08</td>
</tr>
</tbody>
</table>

Notes: N’s range from 1069 to 1052 due to occasional missing data. Dieting = the dieting subscale of the Eat-26. Bulimia = the bulimia and food preoccupation subscale of the Eat-26. Oral = the oral control subscale of the Eat-26. RCI-10 = Religious commitment inventory. All tests are one-tailed. * p < 0.01.

One interpretation of these findings could be based on the view of eating disorders as a culturally reactive syndrome; a dysfunctional response to sociocultural change (Nasser, 2009). The symptoms of culturally reactive disorders are generally viewed as being the magnification or exaggeration of behaviours that are favourably sanctioned by the society (Gordon, 2000). In the UAE religiosity and thinness are both viewed as socially desirable traits in females (Thomas et al., 2014). It might be that eating disorders symptoms (dieting and oral control) and religiosity are both related to ideals of Emirati femininity. The fact that the bulimic subscale of the Eat-26 was inversely correlated with religiosity would fit within this analysis, in that, bulimic behaviours (purging etc.) are generally viewed as socially undesirable. This interpretation would also fit with the previous research identifying high levels of perfectionism as being associated with eating disorders (Lavender et al., 2006).

Perfectionism is cited as both a risk and maintaining factor for the anorexia nervosa (Schmidt & Treasure, 2006). This relationship between perfectionism and eating disorders is also evident at the subthreshold level (Sherry et al., 2004). In general, perfectionism has been viewed as being particularly maladaptive when it is underpinned by socially prescribed standards (socially prescribed perfectionism), as opposed to standards set by the self-self orientated perfectionism (Kilbert et al., 2005). Religion is a potential source of socially prescribed standards, and religiosity has previously been positively correlated with perfectionism (Ashby and Huffman, 1999; Crosby, 2010; Thelander, 2002). Perhaps the relationship between religiosity and eating disorders symptoms observed in the present study is at least partially explained or influenced (mediated or moderated) by perfectionism.

The relationships between eating disorders, religiosity and perfectionism, might also be discussed with reference to obsessive-compulsive disorder (OCD) given its high rate of co-morbidity with eating disorders (Milos et al., 2002). Perfectionism has been identified as one of the six domains of OCD (Frost and DiBartolo, 2002), and both clinical and non-clinical populations demonstrate a positive association between perfectionism and OCD symptomatology (Frost and Steketee, 1997). The prevalence of OCD symptoms has also been positively correlated with religiosity in Jewish, Christian and Muslim participants (Abramowitz et al., 2004; Sica et al., 2002; Yorulmaz et al., 2009). Exploring the interaction between perfectionism and religiosity may identify an important trans-diagnostic vulnerability factor. There may be contexts where high levels of religiosity coupled with other psychological traits (e.g. perfectionism or psychological inflexibility) represent a heightened vulnerability for the development of eating disorders.

The relationship between religiosity and eating disorders merits further exploration in general. In the Islamic context, religious occasions such as the holy month Ramadan may represent a challenging time for individuals vulnerable to, or recovering from, eating disorders. The self-published case study of one Emirati anorexia patient captures this idea:

‘I abused the good intentions behind the holy month and will forever be ashamed. It was an anorexic’s dream come true. I could go all day without eating a thing, have my dose of exercise by horseback riding, and then at iftar (the breaking of the fast) eat only the little set of ‘safe’ foods I had prescribed for myself: a green apple, a 90 cal cereal bar and a glass of orange juice’ (Al-Romaithi, ND).

Despite the relatively large sample in the present study, the use of healthy university students means that eating disorders symptomatology was only explored at the subthreshold level, thereby limiting the generalizability of the results.


Thelander, S.E., 2002. The Relationship of Adaptive and Maladaptive Dimensions of Perfectionism to Qualities of Spiritual Functioning, the Sciences and Engineering. Biola University, Rosemead School of Psychology, Biola University.


Thomas, J., 2016. Mindfulness and Muslim women: acceptance of a metacognitive intervention, International Psychology Conference Dubai (ICPD), Heriot Watt University, Dubai Campus, UAE.


