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# Religion, moral thought–action fusion, and obsessive–compulsive features in Israeli Muslims and Jews

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**ABSTRACT**

Previous studies suggest that the link between obsessive–compulsive (OC) symptoms and moral thought–action fusion (TAF) depends on religion; however, no study has compared Muslim and Jewish samples. We examined the relationships between OC symptoms, scrupulosity, religiosity, and moral TAF in Israeli Muslims and Jews. Religiosity was not associated with elevations in OC symptoms, although religiosity correlated with scrupulosity across the entire sample after controlling for depression and anxiety. Moral TAF was related to scrupulosity across the entire sample. The Muslim group had higher levels of OC symptoms, scrupulosity, and depressive symptoms than did the Jewish group, but the groups were equally religious. In addition, Muslims scored higher than did Jews on moral TAF even after controlling for symptoms; however, moral TAF was not related to scrupulosity within the Muslim group. In combination, these results imply that moral TAF depends on cultural and religious factors and does not necessarily indicate pathology.

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Obsessive–compulsive disorder; scrupulosity; thought–action fusion; cognition; cross-cultural; religiosity



## Introduction

More than a century ago, Freud (1907) linked religious rituals to obsessive–compulsive disorder (OCD). In his view, religious rituals and OCD compulsions similarly protect one's psyche from submitting to temptation. Nevertheless, religious rituals, which can be viewed as healthy, differ in many ways from pathologically compulsive rituals. Compulsive rituals are typically driven by anxiety, discomfort, or distress, and can be inconsistent with the individual's values and goals. Even when compulsive rituals manifest in the domain of religious practice, they are typically excessive, rigid, and deviate from communal standards of religious observance among the individual's co-religionists (cf. Greenberg, Witztum, & Pisante, 1987).

Although some studies of non-clinical populations have found an association between religiosity and OC symptoms or cognitions (e.g., Abramowitz, Deacon, Woods, & Tolin, 2004; Sica, Novara, & Sanavio, 2002), most studies demonstrate that religiosity per se is

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uncorrelated with OC symptoms or diagnostic status (e.g., Hermesh, Masser-Kavitzky, & Gross-Isseroff, 2003; Siev, Chambless, & Huppert, 2010; Steketee, Quay, & White, 1991; Zohar, Goldman, Calamary, & Mashiah, 2005). In fact, even in the studies by Abramowitz et al. (2004) and Sica et al. (2002), religiosity was correlated with OC symptoms only for a minority of symptom subscales, and the symptom scores were low and clearly non-clinical. However, whereas there is little evidence that religiosity is related to clinically meaningful OCD symptoms, it is the case that religious individuals who do have OCD are likely to experience obsessional fears and compulsive rituals with religious content and practice (i.e., scrupulosity; Siev & Huppert, 2016). For example, Steketee et al. (1991) found more religious-related obsessions and compulsions among religious people with OCD compared to less religious people with OCD.

Scrupulosity is an OCD presentation in which symptoms are manifest in religious or moral contexts (Greenberg & Huppert, 2010). Individuals with scrupulosity experience constant doubts about sins and uncontrolled impulses to commit excessive religious behaviour (Abramowitz, Huppert, Cohen, Tolin, & Cahill, 2002). They may engage in intense ruminations and reflections (Abramowitz, 2001), and often attribute moral and religious values to mundane thoughts and actions. Furthermore, normal religious practices, such as praying, may transform into compulsions (Bonchek, 2009; Ciarrocchi, 1995). Overall, studies in Western cultures estimate that up to one-third of individuals with OCD have some scrupulous symptoms (Eisen et al., 1999; Mataix-Cols, Marks, Greist, Kobak, & Baer, 2002), and 5–6% have primary scrupulosity (Foa, Kozak, Goodman, Hollander, Jenike, & Rasmussen, 1995; Tolin, Abramowitz, Kozak, & Foa, 2001). However, these numbers are likely considerably higher in cultures that place greater emphasis on religious practice (e.g., Tek & Ulug, 2001). Moreover, the prevalence of scrupulosity in the general population may be underestimated due to the possibility that people experiencing scrupulosity may seek religious guidance instead of clinical treatment (Miller & Hedges, 2008). In sum, an abundance of research on the association between OCD and religion (Abramowitz et al., 2004; Ghassemzadeh et al., 2002; Hermesh et al., 2003; Shooka, al-Haddad, & Raees, 1998; Siev et al., 2010; Steketee et al., 1991; Yorulmaz, Gençöz, & Woody, 2009; Zohar et al., 2005) has led to the conclusion that religion may influence the manifestation of OC symptoms rather than their severity (Greenberg, 1984; Tek & Ulug, 2001).

Various studies produced conflicting findings regarding the association between religious affiliation and levels of scrupulosity (Abramowitz et al., 2002; Greenberg & Huppert, 2010; Miller & Hedges, 2008). Abramowitz et al. (2002) found that among those with high levels of religiosity, non-clinical Jewish participants experience less scrupulosity than non-clinical Catholics and Protestants. On the other hand, Greenberg and Huppert (2010) reviewed studies on scrupulosity in a variety of cultures and religions, and concluded that among people with OCD, high levels of scrupulosity are more common in traditional societies, in comparison to less traditional societies.

Thought–action fusion (TAF) is a meta-cognitive tendency that comprises two aspects. The first is the tendency to believe that thoughts are morally equivalent to actions. The second is the belief that having a particular thought about a certain event increases the likelihood of that event occurring (Shafran & Rachman, 2004). TAF is seen as a cognitive risk factor for OCD, but various religions differ significantly in terms of the relative import attached to negative or sinful thoughts, giving rise to the possibility that religious and cultural factors may influence the relationship between TAF and obsessionality. Siev

and Cohen (2007) found that increased religiosity was associated with increased moral TAF in Christians, but not Jews. Moreover, in a non-clinical sample, moral TAF predicted OC symptoms in Jews, but not Christians (Siev et al., 2010), suggesting that TAF only indicates obsessionality when it is not culturally normative. TAF has been significantly associated with features of OCD (Shafran & Rachman, 2004), although studies suggest that it is not specific to OCD, and may be associated with other anxiety disorders (e.g., generalised anxiety disorder; Hazlett-Stevens, Zucker, & Craske, 2002; Muris, Meesters, Rassin, Merckelbach, & Campbell, 2001) as well as with depression (Berle & Starcevic, 2005). In the context of OCD, it has been suggested that TAF is a dimensional phenomenon (Rassin & Koster, 2003), in which at one end of the continuum, religious individuals with OCD experience intense TAF that causes severe distress, which in turn leads to attempts to suppress these thoughts by engaging in compulsive behaviour (Rassin, Merckelbach, Muris, & Spaan, 1999).

Whereas likelihood TAF does not seem specifically relevant to scrupulous, as opposed to other types of obsessional fears, several authors suggest that moral TAF is particularly influential in the context of religious obsessions (e.g., Miller & Hedges, 2008; Shafran & Rachman, 2004). Indeed, anxiety about having immoral, sinful, blasphemous, or offensive thoughts seems to imply an appraisal of cognitions as having moral import along the lines of behaviours. In one of the few studies investigating the association between religion and TAF, a positive correlation was found between religiosity levels and the two categories of TAF in Christians, while among Muslims, the level of religiosity correlated only with moral TAF (Yorulmaz et al., 2009; Yorulmaz, Gençöz, & Woody, 2010).

Christianity and Islam emphasise intentions, pure life style, and belief (i.e., orthodox beliefs). According to theology of Islam: "Actions are (judged) by motives (*niyyah*), so each man will have what he intended" (Badi, 2002, p. 4). Based on this statement (*Hadith*; the oral tradition), the Muslim belief is that actions are judged by intentions. Therefore, actions are good, bad, or permitted based on intentions, and the reward or punishment is based on the intention of the action. This is the case for both behaviours and for thoughts. However, some fundamental differences exist in this respect between the two religions. Whereas Christianity emphasises intentions, pure life style and thoughts (including the belief in Christ), Islam is more ritualistic in nature and is based on a clear system of ceremonies and religious guidelines (i.e., orthoprax). For example, ablution (*Wudu*) is a primary ritual in Islam that involves washing parts of the body in preparation for worship, and according to tradition, prayers are only accepted of those who have completed the ablution ritual (Badi, 2002). Based on the Qur'an, the ablution includes four steps: washing the face, washing the forearms, wiping the head, and wiping the feet. Ablution is based on specific conditions, and Muslims must perform it for physical and spiritual cleanliness before prayer (Johari, Hassan, Anwar, & Kamaruzaman, 2013). Muslim faith states that the ablution is half of the prayer, and without performing it, the prayer is not permitted. Much like Islam, the Jewish religion is based on an elaborate system of ceremonies and religious guidelines (*mitzvot*) that emphasise ritual.

Judaism, much like Islam, emphasises cleanliness and purification (Siev & Cohen, 2007; Yorulmaz et al., 2010). Much of the theology of Judaism recognises both good (*yetzer tov*) and bad inclination (*yetzer rah*) as inherent human qualities and views morality as practicing an ethical lifestyle, rather than suppressing evil and immoral thoughts. Similar to

Judaism, Islam believes that human nature is inherently good but has conflicting motivations. According to the Qur'an: "Indeed, we have created the human being upon the best of forms. Then we reduced him to the lowest of the low, except those who believe and do good, for they shall have an unending reward" (Ali, trans. 2003, p. 4:8). Muslims believe that humans are born without sin, but ultimately will sin. Furthermore, human beings have the ability to learn what is good and bad, and they can choose how to act. Islam and Judaism are similar in many ways. Both are Abrahamic religions that have commandments. In Islam, the commandments are known as the *Sharia*, and in Judaism they are known as the *Halacha*. The *Sharia* and the *Halacha* are similar in that both enforce the primary elements of the Ten Commandments and more; but, they have differences. Many of the Jewish commandments are practical in nature, and there is variability in terms of the emphasis on proper beliefs (Shapiro, 2004), though proper actions are more heavily emphasised in Judaism (orthoprax; Cohen & Rozin, 2001). In contrast, although Islam is very practice-based (orthoprax), it also has a strong emphasis on correct belief (orthodox). For example, there are six articles of proper belief (*imun*) as well as five pillars of faith. The first pillar of faith in Islam (*shahadah*) is belief in only one, non-corporeal God and that Muhammed was his prophet. Any suggestion of disbelief in this primary principle is seen as heresy. Intent in prayer and in charity, two other pillars of faith, demonstrate the importance of proper belief in addition to proper practice in Islam (see above).

To our knowledge, no research to date has examined the association between religion and OC symptoms in Muslim and Jewish samples. Yorulmaz et al. (2009) compared Canadian Christians with Turkish Muslims, a comparison that, although valuable, is limited in that many cultural variables are confounded with religious affiliation. With that in mind, in the present investigation we compare Israeli Muslims and Israeli Jews with respect to the link between the level of religiosity and different levels of OC symptoms, scrupulosity, and TAF. Although different in cultural practices, Israeli Muslims and Israeli Jews share many cultural similarities as a result of being citizens and residents of the same country.

Given the mixed findings in the literature, we decided to examine the association between the strength of religiosity and OC tendencies. In accordance with the high prevalence of scrupulosity among traditional societies, as was indicated by Greenberg and Huppert (2010), we expected a positive association between religiosity and scrupulosity levels in both groups. Due to the great significance of intentions and thoughts attributed by the Islamic religion as opposed to the practical notion of Jewish religion (that emphasises mostly commandments and restrictions), and following the data from Yorulmaz et al. (2010) and Siev et al. (2010), our second hypothesis was that a positive association would be found between religiosity level and moral TAF levels among Muslim participants only. In accordance with traditional characteristics of Judaism and Islam, and with regards to our previous hypothesis, we hypothesised that moral TAF levels would be higher among Muslims than Jews, as opposed to scrupulosity levels, which we expected to be similar. In light of comorbidity between anxiety and depression and OCD (Salkovskis, 1999), TAF (Hazlett-Stevens et al., 2002; Rachman, Thordarson, Shafran, & Woody, 1995), and scrupulosity (Olatunji, Abramowitz, Williams, Connolly, & Lohr, 2007), and in order to control for potential confounding variables, we included measures of anxiety and depression as covariates.

## Method

### Participants

Seventy-seven Israelis (37 men, 40 women) volunteered to participate in this study. Thirty-four participants identified themselves as Muslim (17 men, 17 women) and 43 participants identified themselves as Jewish (20 men, 23 women; see Table 1). Participants were recruited via advertisements in several Israeli academic institutions. After the first round of participants was recruited, they were asked to inform their friends of the study (i.e., snowball sampling). All subjects voluntarily participated in the study. The study was approved by the Institutional Review Board and all participants signed an informed consent according to the Declaration of Helsinki guidelines.

### Measures

*Religiosity measure* was adopted from Cohen, Malka, Rozin, and Cherfas (2006). This measure uses six questions ("How religious are you?", "How spiritual are you?", "To what extent do you practice the requirements of your religion or faith?", "To what extent do you believe in the teaching of your religion or faith?", "How important a part of your identity would you say your religion or faith is to you?", "If someone wanted to understand who you are as a person, how important would your religion or faith be in that?"). Participants rate each question on a 5-point scale ranging from 1 ("not at all") to 5 ("extremely"). The questionnaire was translated to Hebrew and back to English by two bilingual persons. All items are summed and the total score of the religiosity scale ranges from 6 to 30. In our sample, Cronbach's $\alpha = .65$.

The *Thought–Action Fusion Scale* (TAFS; Shafran, Thordarson, & Rachman, 1996) is a 19-item self-report questionnaire designed to measure the TAF construct in relation to OCD. The scale consists of three subscales, representing three factors (i.e., moral, likelihood-others, and likelihood-self). The moral subscale evaluates the degree to which the subject believes that thoughts are morally equivalent to actions (e.g., "Having a blasphemous thought is almost as sinful as a blasphemous action"). The two likelihood scales, which are sometimes combined into a single scale, evaluate the degree to which the subject believes that thinking about something makes it more likely to happen, either to others or oneself (e.g., "If I think of a friend/relative having a car accident, this increases the risk that he/she will have a car accident" or "If I think of myself having a car accident, this increases the risk that I will have a car accident"). Participants rate the degree to which they agree with each statement on a 5-point scale, ranging from 0 ("disagree strongly") to 4 ("agree strongly"). The questions were translated to Hebrew and back to English by two bilingual persons. The TAFS has been validated in clinical and non-clinical populations and

**Table 1.** Demographic group composition.

| | Muslim ($n = 34$) | Jewish ($n = 43$) | $t$ (75)/$\chi^2$(1) | Sig |
|---|---|---|---|---|
| Age *M* (*SD*) | 31.20 (10.39) | 28.85 (5.07) | 1.30 | .20 |
| % Female | 50% | 53.49% | .09 | .76 |
| Education (years) *M* (*SD*) | 14.79 (2.83) | 15.65 (1.85) | 1.60 | .11 |

was found to have good psychometric properties (Rassin, Merckelbach, Muris, & Schmidt, 2001; Shafran et al., 1996). Various studies show that moral TAF correlates with religiosity in religious and non-religious samples (Rassin & Koster, 2003; Sica et al., 2002; Siev & Cohen, 2007). In our sample, internal consistency was very good ($\alpha = .93$ for TAF moral, and $\alpha = .90$ for TAF likelihood).

*The Obsessive–Compulsive Inventory-Revised* (OCI-R; Foa et al., 2002) is an 18-item self-report scale. The OCI-R evaluates six types of OC symptoms that correspond to symptom dimensions found in previous factor analytic research: washing, checking/doubting, obsessing, neutralising, ordering, and hoarding. Participants rate the degree to which they were bothered by the situation described in the item in the last month, ranging from 0 ("not at all") to 4 ("extremely"). Because we did not have specific hypotheses about different subscales, we conducted primary analyses using the total score. The OCI-R was shown to have good psychometric properties in both clinical and non-clinical populations (Foa et al., 2002). In this study, $\alpha = .88$.

*The Penn Inventory of Scrupulosity* (PIOS) is a 19-item self-report questionnaire developed to assess scrupulosity in the context of OCD (Abramowitz et al., 2002). The questionnaire encompasses two subscales relevant to the fear of inappropriate thoughts or punishments (e.g., "I worry I must act morally at all times or I will be punished"). Participants rate how often they experience the situation described in the item, ranging from 0 ("never") to 4 ("all the time"). The PIOS was found to have good psychometric properties in non-clinical samples (Olatunji et al., 2007). In the current study the PIOS was found to have excellent reliability ($\alpha = .95$).

*The Beck Depression Inventory Revised* (BDI-II) (Beck, Steer, & Brown, 1996) is a gold standard self-report questionnaire that assesses severity of depressive symptoms. The BDI-II has 21 items, covering mood, self-esteem, sleeping habits, appetite, guilt feelings, and suicidal ideation. Participants choose the item that best describes their state over the last week. The BDI-II has good psychometric properties (Beck et al., 1996), and was found to have very good internal consistency in our sample ($\alpha = .89$).

*The State-Trait Anxiety Inventory* (STAI) is a widely used measure of state and trait anxiety symptoms (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). The 6-item short version of state anxiety subscale (STAI-S) assesses the current experience of anxiety (e.g., "I am feeling agitated"). The trait anxiety subscale (STAI-T) measures the enduring or chronic experience of anxiety (e.g., "I feel nervous and restless"). Both subscales demonstrate good psychometric properties. In the current sample, $\alpha = .87$ for STAI-S and $\alpha = .86$ for STAI-T.

## Procedure

After consenting to participate, participants received an e-mail with a link directing them to a secure URL where they completed the questionnaires anonymously. Missing data were imputed for each individual by calculating his or her average item score on any given scale or subscale, provided the participant completed at least 80% of the items on that scale or subscale.

## Results

### Group differences

As presented in Table 1, the Muslim group did not differ significantly from the Jewish group with respect to gender ($p = .76$), age ($p = .20$), or years of education ($p = .11$). As presented in Table 2, the Muslim group reported significantly more OC symptoms ($p = .002$), scrupulosity ($p < .001$), and depression ($p = .008$) than did the Jewish group, although they were not more religious ($p = .58$). *Post hoc* analyses revealed that the Muslim group scored significantly higher than the Jewish group on the washing, checking, neutralising, and ordering OCI-R subscales, but not obsessing or hoarding. The Muslim group also endorsed significantly higher moral TAF than did the Jewish group ($p < .001$). The groups did not differ significantly on state ($p = .09$) or trait ($p = .17$) anxiety symptoms.

In order to examine whether the group difference in moral TAF was a function of differential symptom scores, the groups were compared on moral TAF after controlling for symptoms of OCD, depression, state anxiety, and trait anxiety. An ANCOVA revealed that Muslims scored higher than Jews on moral TAF independent of symptoms, $F$ (1, 68) = 22.28, $p < .001$, $\eta_p^2 = .25$.

### Religiosity and symptoms

Within the Muslim group, religiosity was either uncorrelated with, or associated with better outcomes on all symptom measures. Religiosity predicted significantly less depression ($r = -.39$, $p = .025$), and there were non-significant trends for lower levels of OC symptoms ($r = -.30$, $p = .09$) and state anxiety ($r = -.29$, $p = .09$). It was not associated with trait anxiety ($r = -.20$, $p = .26$) or, surprisingly, scrupulosity ($r = -.10$, $p = .59$).

Within the Jewish group, there was only a non-significant trend indicating a positive association between religiosity and state anxiety ($r = .29$, $p = .06$). Religiosity was uncorrelated with OC symptoms ($r = .08$, $p = .62$), scrupulosity ($r = .21$, $p = .18$), trait anxiety ($r = -.10$, $p = .55$), and depression ($r = -.20$, $p = .20$).

Considering that the groups differed on depression and had different patterns of associations between religiosity and both depression and anxiety, partial correlations between religiosity and both OC and scrupulosity symptoms were run controlling for depression and state and trait anxiety. After controlling for depression and anxiety,

**Table 2.** Group comparison on clinical and religious measures.

| | Muslim ($n = 34$) $M$ ($SD$) | Jewish ($n = 43$) $M$ ($SD$) | $t$ (df) | Sig | Effect Size ($d$) |
|---|---|---|---|---|---|
| OCI-R | 24.56 (13.23) | 15.77 (10.39) | 3.27 (75) | **.002** | .76 |
| PIOS | 26.54 (17.64) | 13.49 (10.11) | 4.04 (74) | **<.001** | .94 |
| Religiosity | 18.21 (4.77) | 17.65 (4.04) | .56 (75) | .58 | .13 |
| TAFS – Moral | 25.24 (11.07) | 13.33 (9.72) | 4.99 (74) | **<.001** | 1.16 |
| STAI – State | 14.79 (2.43) | 14.03 (1.36) | 1.75 (75) | .09 | .41 |
| STAI – Trait | 45.82 (4.83) | 47.20 (3.78) | −1.39 (73) | .17 | .32 |
| BDI-II | 10.91 (10.50) | 5.77 (5.89) | 2.72 (75) | **.008** | .63 |

Note: BDI-II, Beck Depression Inventory Revised; OCI-R, Obsessive–Compulsive Inventory-Revised; PIOS, Penn Inventory of Scrupulosity; STAI, State-Trait Anxiety Inventory; TAFS, Thought–Action Fusion Scale. Values in bold font are significant at an alpha level of .05.

religiosity was still uncorrelated with OC symptoms across the entire sample ($pr = .11$, $p = .37$) and among both Muslims ($pr = -.11$, $p = .57$) and Jews ($pr = .08$, $p = .65$). However, independent of the effects of depression and anxiety, religiosity was correlated with scrupulosity ($pr = .28$, $p = .02$) across the whole sample. The magnitude and direction of the association was similar in both groups separately, although in the smaller samples the correlations were non-significant or significant only at a trend level. In the Muslim group, $pr = .20$, $p = .28$; in the Jewish group, $pr = .28$, $p = .09$.

In summary, regarding the primary question of the relationships between religiosity and symptoms of OCD and scrupulosity, religiosity was not associated with OC symptoms. When controlling for depression and anxiety, there was some evidence that religiosity was associated with symptoms of scrupulosity, although the effect was not significant in the separate groups.

### *Religion and moral TAF*

Across the entire sample, religiosity was significantly correlated with moral TAF, $r = .24$, $p = .04$. Within the Muslim group, the correlation was $r = .27$, $p = .12$. The correlation within the Jewish group was smaller and also non-significant, $r = .16$, $p = .30$.

After controlling for symptoms of depression and anxiety, the correlation between religiosity and moral TAF across the group was little changed, $pr = .23$, $p = .06$. For both groups, the partial correlations were smaller and non-significant: within the Muslim group, $pr = .15$, $p = .42$, and within the Jewish group, $pr = .13$, $p = .45$.

### *Moral TAF and symptoms*

Across the entire sample, moral TAF was significantly correlated with scrupulosity ($r = .36$, $p = .002$) and there was a trend with OC symptoms ($r = .21$, $p = .07$). However, moral TAF was not significantly related to scrupulosity or OC symptoms in either group alone, and the effect sizes were all smaller. In the Muslim group, $r = .15$, $p = .40$ for scrupulosity, and $r = -.01$, $p = .94$ for OC symptoms. In the Jewish group, $r = .27$, $p = .09$ for scrupulosity, and $r = .12$, $p = .46$ for OC symptoms.

## Discussion

The purpose of this study was to examine the relationships between level of religiosity, OC symptoms, scrupulosity, and moral TAF in Israeli Muslims and Jews. First, religiosity was not associated with symptoms of OCD in either group, who were equally religious. These results are consistent with the preponderance of research reviewed above that being more religious does not cause or derive from OCD, and extend those findings to this novel population. We expected that religiosity would correlate with scrupulosity, which was indeed the case, but only after controlling for depression and anxiety. However, in a non-clinical sample, elevations in scrupulosity may not indicate clinically relevant symptoms. That is, among people without OCD, religiosity is likely to correlate with concerns about issues such as behaviour that is unacceptable to God or heaven and hell without implying obsessionality (Abramowitz et al., 2002). Overall, it is noteworthy that religiosity was not significantly associated with any symptoms in either group, with one exception:

Among Muslims, who reported higher levels of depression than Jews, religiosity predicted less depression. This is consistent with previous research demonstrating that certain types of religiousness may buffer against depressive symptoms (e.g., Smith, McCullough, & Poll, 2003).

Second, Muslims scored considerably higher than did Jews on moral TAF even after controlling for OCD, depression, and anxiety. Moreover, we found small, non-significant correlations between religiosity and moral TAF in the separate groups. The correlation was slightly larger in Muslims ($r = .27$) than Jews ($r = .16$). The magnitudes of these effects are consistent with the pattern of findings in previous research on religious affiliation as a moderator of this relationship. Whereas religiosity and moral TAF are strongly correlated in Christians (Siev & Cohen, 2007; Siev et al., 2010; Yorulmaz et al., 2009), they are uncorrelated in Jews (Siev & Cohen, 2007; Siev et al., 2010), and in Muslims the relationship is small to moderate (Yorulmaz et al., 2009).

Third, moral TAF was related to scrupulosity and marginally to OC symptoms across the entire sample, but the effect was non-significant in each group alone. In the Muslim group, the effects were small or non-existent, and in the Jewish group the effects were small or moderate. In combination, a pattern emerges such that (a) Jewish religion and religiosity is not (or slightly) associated with moral TAF, whereas Muslim religion and religiosity is more strongly associated with moral TAF, but (b) moral TAF is more likely associated with scrupulosity among Jews than Muslims. Comparing Jews and Christians, Siev et al. (2010) found a similar, albeit more pronounced, pattern such that Jewish religiosity was unrelated to moral TAF, which was correlated with OC symptoms, and Christian religiosity was associated with moral TAF, which was uncorrelated with OC symptoms. The results of the present study give rise to the possibility that in both respects Muslims may fall somewhere between Jews and Christians. On the one hand, religiosity seems to predict moral TAF more strongly among Muslims than Jews and less strongly among Muslims than Christians. On the other hand, only in Jews for whom moral TAF is not related to religiosity does it potentially indicate symptoms. Taken together, this reinforces the point that supposedly obsessional beliefs are not pathological unless they exceed normative cultural beliefs.

This investigation had strengths and limitations. One strength of this study is that religious comparisons were conducted in individuals from the same country, all of whom were fluent in Hebrew. Previous research comparing Muslims and Christians on similar measures, for example, included Turkish Muslims and Canadian Christians (e.g., Yorulmaz et al., 2009). It is both a strength and limitation that in this study conducted in Israel, the Jewish participants were members of the majority instead of minority group (Zohar et al., 2005). In contrast, unlike the studies of Turkish Muslims, the Muslim sample in this study was a minority group. It is possible that this contributed to the overall higher levels of symptoms of depression and OCD in the Muslim sample that were not predicted. In any case, in light of the group differences in symptoms levels, analyses were run controlling for these variables. Another limitation relates to the reliance on self-report questionnaires.

Future research should examine cross-cultural differences in the relationships among religiosity, OC symptoms, scrupulosity, and moral TAF in a clinical sample. Furthermore, given the research that has compared Jews to Christians, Christians to Muslims, and now Jews to Muslims, it is important to examine all three of the major monotheistic

religions in a single dataset to better understand the relationship between religion and OC symptoms in those religions.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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