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## Muslim Distress Mobilization Hypothesis: complex roles of Islamic Positive Religious Coping and Punishing Allah Reappraisal in Iranian students

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### ABSTRACT

Muslim religious coping may include distress mobilisation effects that explain why adaptive and maladaptive forms of religious coping correlate positively rather than nonsignificantly, as they usually do in the West. In this study, 147 Iranian university students responded to Islamic Positive Religious Coping (IPRC) and Punishing Allah Reappraisal (PAR) Scales along with Religious Orientation, Perceived Stress, and mental health measures. IPRC and PAR correlated positively, and procedures accounting for their covariance were essential in disambiguating their implications. IPRC predicted stronger Intrinsic and Extrinsic Personal Religious Orientations, but PAR displayed no relationship with religious motivations. PAR pointed toward broadly negative mental health influences with IPRC displaying limited ties with adjustment. PAR partially mediated some Perceived Stress relationships with poorer mental health. These data offered some support for a Muslim Distress Mobilization Hypothesis, but also uncovered issues that require further clarification.

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Western research focusing largely on Christians demonstrates that religion can both help and hinder personal efforts to cope with life stressors (Pargament, 1997). Data for the Brief Positive and Negative Religious Coping Scales illustrate the possibility (Pargament, Feuille, & Burdzy, 2011). Positive Religious Coping assesses a close relationship with a loving and supportive God and often predicts success in meeting life demands. Negative Religion Coping operationalises an insecure connection with a punitive and not always responsive God and is a frequent correlate of more problematic functioning. Average responding to Positive Religious Coping is also typically higher than to Negative Religious Coping, perhaps reflecting the relatively greater comfort that is available in the former. Correlations between the two measures are usually nonsignificant, in line with assumptions that they are orthogonal (Pargament et al., 2011).

Studies examining other religions and cultures have confirmed that religious coping can predict both better and poorer mental health (Abu Raiya & Pargament, 2015). Such data include investigations conducted in Muslim societies, but complexities do sometimes

appear. In Pakistan, for instance, presumed indices of better religious coping can sometimes predict maladjustment (Khan, Watson, & Chen, 2011, 2016). Brief Positive and Negative Religious Coping Scales have also correlated positively rather than nonsignificantly in both Pakistan (Khan, Sultana, & Watson, 2009; Khan & Watson, 2006; Khan, Watson, & Chen, 2012) and Iran (Ghorbani, Watson, Tahbaz, & Chen, 2016; Rajabi, Saremi, & Bayazi, 2012; Rohani, Khanjari, Abedi, Oskouie, & Langius-Eklöf, 2010).

Positive and Negative Religious Coping, therefore, may not be orthogonal in Muslim cultural contexts. In Iran, average responding on Positive Religious Coping is, nevertheless, higher than on Negative Religious Coping, just as it has been in the West. In addition, Positive Religious Coping predicts religious and psychological adjustment. Negative Religious Coping displays linkages with psychological maladjustment, but not with basic religious motivations. Importantly, however, these religious and psychological implications only become clear in statistical procedures that account for the covariance between these two measures (Ghorbani, Watson, Tahbaz, et al., 2016). This covariance can have similar influences in Pakistan as well (Khan & Watson, 2006).

Recent findings, therefore, suggest that direct covariance rather than orthogonality may obscure the impacts of positive and negative forms of Muslim religious coping. A Muslim Distress Mobilization Hypothesis may usefully clarify the issue. Central to this hypothesis is the suggestion, "Although it is generally assumed that positive religious coping leads to reduction in distress, it is also possible that distress mobilizes positive religious coping" (Abu Raiya & Pargament, 2015, p. 27). One version of this hypothesis might, therefore, suggest that distress globally activates Muslim coping resources and the maladjustment of this global activation obscures the differential impacts of more specific forms of religious coping. The present project explored that suggestion.

### **Present study**

Distress mobilisation implies an influence on coping resources generally, and not only on those assessed by the Brief Religious Coping Scales. This investigation, therefore, analysed different religious coping constructs taken from the Psychological Measure of Islamic Religiousness (Abu Raiya, Pargament, Mahoney, & Stein, 2008). Factor analyses (Abu Raiya, 2008; Khan et al., 2011) reveal that this instrument includes a more maladaptive form of religious coping called Punishing Allah Reappraisal (PAR) and a more adaptive Islamic Positive Religious Coping (IPRC). Pakistani research already demonstrates that these two factors display effects that parallel those observed with the Brief Religious Coping Scales (Khan et al., 2011; Khan, Watson, Chen, Iftikhar, & Jabeen, 2012). In Iran, as well, direct covariance rather than orthogonality describes the relationship between these two measures (Ghorbani, Watson, Geranmayepour, & Chen, 2013).

Based on the Muslim Distress Mobilization Hypothesis and on previous Pakistani and Iranian data, the first expectation was that average responding on IPRC would be higher than on PAR. A direct linkage should also appear between these two measures. IPRC should predict stronger religious motivations and psychological adjustment. PAR should be a correlate of psychological maladjustment, but not of religious motivations. A positive relationship between these two measures should mean, however, that these religious and psychological implications become clearer in statistical procedures that look at one measure after accounting for variance in the other.

## ***Measures of religious and psychological adjustment***

Assessment of religious motivations involved use of the Gorsuch and McPherson (1989) Religious Orientation Scales. The Intrinsic Religious Orientation records an attempt to make religion the master motive in life. The Extrinsic Personal motivation represents the use of religion to secure a sense of well-being. The Extrinsic Social Orientation describes religion as a means to desired social ends. Research documents the Intrinsic and Extrinsic Personal Orientations as predictive of religious adjustment in Iran, but the Extrinsic Social Orientation has ambiguous implications (Ghorbani, Watson, & Khan, 2007).

An array of constructs evaluated mental health. Administration of the Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983) made it possible not only to measure this aspect of maladjustment, but also to test hypotheses about mediation. Logic suggests that religious coping should mediate the negative influences of stress on mental health. PAR should help produce and IPRC should help ameliorate such effects.

Additional measures assessed both better and poorer mental health. Recording relative adjustments were Integrative Self-Knowledge (Ghorbani, Watson, & Hargis, 2008), Self-Control (Tangney, Baumeister, & Boone, 2004), Mindfulness (Brown & Ryan, 2003), and Self-Esteem (Rosenberg, 1965) Scales. The evaluation of poorer mental health centred on the assumption that the anxiety mobilised by stress might make itself apparent in the use of irrational defence mechanisms. Procedures, therefore, assessed the defence mechanism of splitting and tendencies toward the borderline personality, which in part features an overreliance upon splitting and other defence mechanisms (Kernberg, 1975). Splitting occurs when an individual represents the self or others as all good or all bad. This cognitive immaturity helps maintain psychological cohesion by simplifying attempts to understand instabilities in interpersonal relationships. In the present project, the Splitting Index operationalised Self-Splitting, Family Splitting, and Other Splitting (Gould, Prentice, & Aisnlie, 1996). Two instruments measured tendencies toward the borderline personality (Leichsenring, 1999; Zanarini et al., 2003).

## ***Hypotheses***

In summary, this study tested six hypotheses in order to evaluate the Muslim Distress Mobilization Hypothesis.

First, and most importantly, IPRC should correlate positively with PAR.

Second, average responding on IPRC should be higher than on PAR.

Third, IPRC should predict stronger Intrinsic and Extrinsic Personal Religious Orientations whereas PAR should be unrelated to these religious motivations. No predictions were made for the ambiguous Extrinsic Social Orientation.

Fourth, IPRC should correlate positively with Integrative Self-Knowledge, Self-Control, Mindfulness, and Self-Esteem and negatively with Perceived Stress, splitting, and measures of the borderline personality disorder. Opposite relationships should appear for PAR.

Fifth, religious and psychological implications of IPRC and PAR should be clearer in statistical procedures that control for their covariance.

Sixth and finally, IPRC and PAR should mediate the problematic effects of Perceived Stress on mental health.

## Method

### *Participants*

Research participants included 147 students from two universities in Tehran, Iran. Average age of these 43 men and 104 women was 26.9 (SD = 4.27).

### *Measures*

All psychological measures appeared in a single booklet. Creation of a Persian version of the Integrative Self-Knowledge Scale occurred during its development. Translation of the Splitting Index and the two borderline personality measures occurred in preparations for the present study with all other scales translated prior to previous Iranian projects. In all procedures, one person translated a scale from English into Persian, which another then translated back into English. Differences between original and back-translated measures were minor and easily resolved through refinements in the translations. Scales appeared in the booklet in the order of their description below. Unless otherwise noted, each measure presented 1-to-5 Likert Scale response options. The scoring of each instrument involved use of the average response per item.

#### *Integrative Self-Knowledge*

The Integrative Self-Knowledge Scale ( $\alpha = .85$ ,  $M = 3.75$ ,  $SD = .68$ ) recorded efforts of the individual to unify past, present, and desired future self-experience into a meaningful whole (Ghorbani et al., 2008). Illustrating these 12 items was the statement, "If I need to, I can reflect about myself and clearly understand the feelings and attitudes behind my past behaviors."

#### *Self-Control*

Thirteen statements made up the Tangney et al. (2004) Brief Self-Control Scale ( $\alpha = .85$ ,  $M = 3.07$ ,  $SD = .63$ ). Indicative of Self-Control was the claim, "I am good at resisting temptation."

#### *Religious Orientation*

With minor wording changes as necessary for the Iranian cultural context, Gorsuch and McPherson (1989) Religious Orientations Scales assessed Intrinsic (eight items,  $\alpha = .75$ ,  $M = 2.95$ ,  $SD = .79$ ), Extrinsic Personal (three items,  $\alpha = .86$ ,  $M = 2.96$ ,  $SD = 1.25$ ), and Extrinsic Social (three items,  $\alpha = .80$ ,  $M = 1.52$ ,  $SD = .73$ ) motivations for being religious. A representative Intrinsic item said, "My whole approach to life is based on my religion." Exemplifying the Extrinsic Personal motivation was the self-report, "What religion offers me most is comfort in times of trouble and sorrow." The Extrinsic Social Orientation appeared in such claims as, "I go to activities associated with my religion because I enjoy seeing people I know there."

#### *Mindfulness*

The Brown and Ryan (2003) Mindful Attention Awareness Scale operationalised mindfulness defined as a nonjudgmental awareness of the present. This instrument used 1-to-6 response options and included 15 reverse scored expressions of a lack of mindfulness

( $\alpha = .84$ ,  $M = 4.08$ ,  $SD = .71$ ). A representative item said, "I find it difficult to stay focused on what's happening in the present."

### ***Splitting***

The Splitting Index used eight items each to assess three forms of this defence mechanism (Gould et al., 1996). Exemplifying Self-Splitting ( $\alpha = .78$ ,  $M = 2.57$ ,  $SD = .82$ ) was the statement, "My feelings about myself are very powerful, but they can change from one moment to the next." Family Splitting ( $\alpha = .84$ ,  $M = 1.88$ ,  $SD = .74$ ) appeared in such claims as, "It is impossible to love my parents all the time." A representative expression of Other Splitting ( $\alpha = .83$ ,  $M = 2.25$ ,  $SD = .75$ ) said, "I have doubts about my closest friends."

### ***Punishing Allah Reappraisal***

PAR ( $\alpha = .86$ ,  $M = 1.87$ ,  $SD = .87$ ) included three statements to which participants responded with 1-to-4 response options (Abu Raiya et al., 2008). Representative of this measure was the assertion, "When I face a problem in life, I believe that I am being punished by Allah for bad actions I did."

### ***Borderline Personality Inventory***

The Borderline Personality Inventory ( $\alpha = .83$ ,  $M = .18$ ,  $SD = .15$ ) used 31 "True" (1) – "False" (0) statements to assess tendencies associated with this disorder including identity diffusion, use of primitive defence mechanisms, impaired reality testing, and fear of fusion (Leichsenring, 1999). One identity diffusion item said, for instance, "Sometimes I feel like I am falling apart."

### ***Islamic Positive Religious Coping***

Seven items using a 1-to-4 Likert Scale defined IPRC (Abu Raiya, 2008;  $\alpha = .92$ ,  $M = 2.34$ ,  $SD = .85$ ). Preceding each item was the phrase, "When I face a problem in life." A reaction illustrating IPRC then said, "I look for a stronger connection with Allah."

### ***Borderline Personality Screening***

Ten questions with "Yes" (1) – "No" (0) response options made up the McLean Screening Instrument for Borderline Personality Disorder (Zanarini et al., 2003;  $\alpha = .77$ ,  $M = .29$ ,  $SD = .21$ ). One representative question asked, "Have you chronically felt empty?"

### ***Self-Esteem***

Assessment of Self-Esteem rested upon use of the 10-item Rosenberg (1965) Scale ( $\alpha = .89$ ,  $M = 3.73$ ,  $SD = .92$ ). Indicative of Self-Esteem was the self-report, "I feel that I have a number of good qualities."

### ***Perceived Stress***

The Perceived Stress Scale presented 14 questions about possible stressors experienced during the past month (Cohen et al., 1983;  $\alpha = .80$ ,  $M = 2.95$ ,  $SD = .63$ ). For example, one asked, "In the last month, how often have you felt that you were unable to control the important things in your life?" Responses ranged from 1 ("never") to 5 ("almost always").

## Procedure

Research procedures conformed with institutional regulations about the conduct of ethical research. All participants were volunteers, and all responding was confidential. Statistical procedures began with an examination of correlations among measures. In contrast to the multiple regressions previously used to better differentiate between Positive and Negative Religious Coping in Iran (Ghorbani, Watson, Tahbaz et al., 2016), preliminary analyses demonstrated that a simpler and more straightforward differentiation between IPRC and PAR occurred with partial correlations that looked at one measure after controlling for the other. Final analyses assessed whether IPRC and PAR mediated Perceived Stress linkages with other constructs.

## Results

### Background analyses

Gender displayed no significant relationship with any measure. Subsequent analyses, therefore, ignored this variable. Associations among all but the two religious coping scales appear in Table 1. All three Religious Orientations correlated positively. The Intrinsic and Extrinsic Personal Orientations also exhibited inverse linkages with Family Splitting, and the Extrinsic Social Orientation predicted higher Other Splitting. Unexpected relationships appeared for the Extrinsic Personal Orientation that were negative with Integrative Self-Knowledge and positive with Self-Splitting. Perceived Stress correlated negatively with healthier and positively with unhealthier self-functioning. Constructs recording better mental health correlated positively with each other and negatively with indices of maladjustment. Positive correlations appeared among all measures of maladjustment.

### Religious coping data

As predicted, IPRC displayed a direct connection with PAR,  $r = .53$ ,  $p < .001$ . The mean response per item for IPRC ( $M \pm S.E.M. = 2.34 \pm .07$ ) was also significantly higher than for PAR ( $1.87 \pm .07$ ), Greenhouse-Geisser  $F(1, 146) = 44.09$ ,  $p < .001$ .

Table 2 summarises all other relationships for these two coping constructs. IPRC exhibited direct ties with all three Religious Orientations. In correlations that were opposite in sign from what had been hypothesized, IPRC also predicted lower Integrative Self-Knowledge and higher Self-Splitting. PAR correlated positively with all three Religious Orientations, with Perceived Stress, and with all additional measures of maladjustment except for Family Splitting. PAR also predicted lower Integrative Self-Knowledge, Self-Control, Mindfulness, and Self-Esteem.

Table 2 also presents partial correlations looking at one religious coping measure after controlling for the other. After controlling for PAR, IPRC continued to correlate positively with all three Religious Orientations, no longer displayed counterintuitive linkages with Integrative Self-Knowledge and Self-Splitting, and predicted higher Self-Esteem and lower scores on the Perceived Stress and Borderline Screening measures. Partial correlations controlling for IPRC eliminated all associations of PAR with Religious Orientation Scales, but left all linkages with poorer psychological functioning essentially unchanged.



**Table 1.** Relationships among religious orientation and mental health measures.

Variables	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Intrinsic orientation	.66***	.49***	-.08	.04	.01	-.08	-.04	-.01	-.31***	.08	-.01	-.07
2. Extrinsic personal	-	.39***	.05	-.19*	-.06	-.15	-.03	.17*	-.17*	.09	.09	.00
3. Extrinsic social		-	.01	-.10	-.15	-.08	-.09	.08	-.06	.20*	.03	.00
4. Perceived stress			-	-.53***	-.39***	-.29***	-.67***	.47***	.29***	.33***	.59***	.58***
5. Integrative self-knowledge				-	.39***	.47***	.54***	-.59***	-.28**	-.41***	-.58***	-.56***
6. Self-control					-	.41***	.53***	-.40***	-.25**	-.30***	-.42***	-.45***
7. Mindfulness						-	.40***	-.53***	-.19*	-.20*	-.45***	-.33***
8. Self-esteem							-	-.52***	-.34***	-.47***	-.67***	-.59***
9. Self-splitting								-	.32***	.32***	.59***	.46***
10. Family splitting									-	.43***	.36***	.38***
11. Other splitting										-	.46***	.49***
12. Borderline Personality Inventory											-	.69***
13. Borderline personality screening												-

\* $p < .05$ .

\*\* $p < .01$ .

\*\*\* $p < .001$ .

**Table 2.** Zero-order and partial correlations of IPRC and PAR with religious orientation and mental health measures.

Variables	IPRC		PAR	
	<i>r</i>	<i>r<sub>ab.c</sub></i>	<i>r</i>	<i>r<sub>ab.c</sub></i>
Intrinsic orientation	.61***	.57***	.29***	-.05
Extrinsic personal	.75***	.69***	.39***	-.01
Extrinsic social	.31***	.26***	.19*	.03
Perceived stress	.04	-.18*	.35***	.39***
Integrative self-knowledge	-.18**	.01	-.36***	-.31***
Self-control	-.07	.10	-.29***	-.30***
Mindfulness	-.15	-.04	-.25**	-.17*
Self-esteem	.03	.17*	-.31***	-.35***
Self-splitting	.17*	.06	.23***	.17*
Family splitting	-.15	-.14	-.06	.02
Other splitting	.08	-.07	.25***	.25***
Borderline Personality Inventory	.12	-.08	.34***	.33***
Borderline personality screening	-.01	-.19*	.28**	.34***

Note: Partial correlations involve analysis of IPRC after controlling for PAR and vice versa.

\* $p < .05$ .

\*\* $p < .01$ .

\*\*\* $p < .001$ .

In passing, it may also be important to note that partialing out PAR eliminated the counterintuitive Extrinsic Personal connections with lower Integrative Self-Knowledge ( $r_{ab.c} = -.06$ ,  $p = .50$ ) and higher Self-Splitting, ( $r_{ab.c} = .09$ ,  $p = .28$ ). In addition, these partial correlations uncovered inverse relationships of the Intrinsic Religious Orientation with Perceived Stress ( $r_{ab.c} = -.20$ ,  $p < .05$ ) and Borderline Personality Screening ( $r_{ab.c} = -.17$ ,  $p < .05$ ) scores. For the Extrinsic Social Orientation, the partial correlation did slightly reduce the inverse connection with Family Splitting ( $r_{ab.c} = -.16$ ,  $p = .06$ ).

## Mediation

Mediation analyses examined whether religious coping mediated relationships of Perceived Stress as the independent variable with indices of self-functioning as dependent variables. As demanded by these analyses, Perceived Stress exhibited significant associations with all potential dependent variables including measures of both adjustment ( $\beta = -.29$  to  $-.67$ ,  $ps < .001$ ) and maladjustment ( $\beta = .29$  to  $.59$ ,  $ps < .001$ ).

Baron and Kenny (1986) argue that mediation requires that an independent variable predict a potential mediator. Perceived Stress displayed a direct connection with PAR,  $\beta = .35$ ,  $p < .001$ . As Table 2 has already made clear, associations of PAR also appeared with all but the Family Splitting measure of self-functioning; so, mediation was at least a theoretical possibility in these instances. With IPRC, however, the relationship with Perceived Stress was not significant,  $\beta = .04$ ,  $p = .66$ . This meant that IPRC could not operate as a potential mediator. IPRC, nevertheless, served as a covariate in all mediation analyses because of its potentially influential association with PAR.

Mediation analyses followed the procedures of Hayes (2012). As Table 3 demonstrates, these analyses identified PAR as a significant partial mediator of Perceived Stress linkages with Integrative Self-Knowledge, Self-Control, Other Splitting, and both Borderline Personality measures. In each instance, the sign of the indirect effect identified PAR as a contributing factor to the disturbing psychological influences of stress.

**Table 3.** PAR as a mediator of perceived stress relationships with measures of psychological adjustment and maladjustment.

Dependent variable	Indirect effect	Boot SE	95% LLLCI	95% ULCLI	Total effect	Direct effect	R <sup>2</sup> ( $\Delta R^2$ )
<i>Psychological adjustment</i>							
Integrative self-knowledge	-.074*	.037	-.169	-.017	-.570	-.496	.313 (.035)*
Self-control	-.061*	.033	-.144	-.009	-.386	-.325	.177 (.027)*
Mindful attention awareness	-.056	.039	-.156	.002	-.319	-.263	.100 (.018)
Self-esteem	-.065	.048	-.180	.016	-.970	-.909	.455 (.008)
<i>Psychological maladjustment</i>							
Self-splitting	.034	.041	-.037	.134	.608	.574	.228 (.005)
Other splitting	.063*	.033	.014	.143	.388	.325	.129 (.021)*
Borderline personality inventory	.013*	.008	.002	.033	.141	.128	.374 (.022)*
Borderline personality screening	.017*	.010	.001	.041	.195	.178	.353 (.015)

Notes: Significant indirect effects and R-squared change ( $\Delta R^2$ ) values are marked with an asterisk (\*). All direct effects are significant at  $p < .01$ . Mediation analyses maintained the conventional focus on unstandardised regression coefficients ( $\beta$ ). The indirect effect examines whether the influence of a mediator was significant as defined by the lower limit (CI-LL) and upper limit (CI-UL) of the confidence intervals. Indirect effects represent the association between the independent variable and the mediator times the association between the mediator and the dependent variable. Tests of significance used 95% confidence intervals that were bias corrected and based upon 1000 bootstrap samples, which are abbreviated as "Boot" in the table. Confidence intervals that do not include 0 identify a significant indirect effect at the .05 level. The total effect is the association of an independent variable with the dependent variable, whereas the direct effect describes this same relationship after accounting for the influence of the mediator.

## Discussion

Results of this investigation offered support for the Muslim Distress Mobilization Hypothesis. IPRC and PAR operated as correlated rather than as orthogonal measures of religious coping in Iranian Muslims. Indeed, the direct relationship between these two measures was robust, and procedures accounting for their covariance proved to be essential in clarifying their religious and psychological implications. IPRC predicted the religious adjustment of Intrinsic and Extrinsic Personal Religious Orientations, but PAR was unrelated to any religious motivation in partial correlations controlling for IPRC. Only a nonsignificant association with Family Splitting failed to identify PAR as broadly maladjusted psychologically. Linkages of IPRC with relative mental health were limited to a positive tie with Self-Esteem and negative associations with Perceived Stress and Borderline Personality Screening scores. These results only appeared after procedures controlled for PAR. PAR also explained counterintuitive zero-order relationships of IPRC with lower Integrative Self-Knowledge and greater Self-Splitting.

Mediation analyses further identified PAR as especially important in clarifying the mental health implications of religious coping. Significant mediation effects suggested that Perceived Stress activated PAR which then interfered with Integrative Self-Knowledge and Self-Control and promoted Other Splitting and tendencies toward borderline personality functioning.

In parallel with previous Iranian findings for the Brief Positive and Negative Coping Scales, average responding for IPRC was higher than for PAR. These data suggested that Iranian Muslims perhaps found the comfort of Positive Religious Coping and IPRC more inviting than the disquiet associated with Negative Religious Coping and PAR.

In summary, these results supported three most important conclusions. First, IPRC was consistent with and PAR unrelated to Iranian religious motivations. Second, PAR broadly

predicted poorer mental health, whereas IPRC displayed only weak and inconsistent ties with psychological adjustment. Third, the limited psychological advantages of IPRC and the irrelevance of PAR for religious motivations became clear only with statistical procedures that accounted for their covariance.

### ***Additional findings***

Two additional findings deserve comment. Again, a covariance with PAR explained linkages of IPRC with lower Integrative Self-Knowledge and with greater Self-Splitting. PAR also explained the Extrinsic Personal relationships with these same measures and also obscured ties of the Intrinsic Orientation with lower Perceived Stress and Borderline Personality Screening scores. Future research might, therefore, reveal that PAR has broad influences on the mental health implications of Muslim religious functioning.

Second, previous research has identified the Extrinsic Social Orientation as an ambiguous index of Muslim religious motivation (Ghorbani et al., 2007). In the present study, the only connection of this measure with psychological functioning was its inverse tie with Family Splitting which was reduced slightly to nonsignificance in partial correlations controlling for PAR. These data once again questioned the Extrinsic Social Orientation as useful in understanding the Muslim psychology of religion.

### ***Limitations***

As with any study, limitations dictate caution in interpretation. Two particular limitations deserve brief mention. First, university students were not representative of the wider population, and these findings may not generalise to Iranian society as a whole. Different results might also appear with Muslims sampled from other cultural contexts. Second, all findings of this project were correlational; so, definitive conclusions about causality are impossible. It cannot be said, for example, that PAR caused IPRC or vice versa. Some other unexamined variable could have produced this and other relationships.

### ***Broader implications***

This study confirmed that a Distress Mobilization Hypothesis may have heuristic potential in efforts to understand Muslim religious coping. At least four issues may be important in the further development of that potential.

First, the present data offered no straightforward evidence that distress globally activated Muslim religious coping. If that had been the case, IPRC presumably would have displayed a positive correlation with Perceived Stress. This did not happen. Instead, a nonsignificant zero-order linkage became negative when partial correlations controlled for PAR. One possibility for explaining this interpretative problem is that Perceived Stress served as a less than ideal index of distress mobilisation. A positive correlation with IPRC might appear with a different measure of distress. Another possibility, however, is that these data may support an Indirect Distress Mobilization model in which distress directly activates problematic forms of Muslim religious coping like PAR and Negative Religious Coping, and these maladjusted reactions then operate on and interfere with more adaptive coping resources. An Indirect Distress Mobilization

Hypothesis would still have to explain why such indirect effects occur with Muslim, but not typically with Western samples.

Second, some version of the Distress Mobilization Hypothesis may usefully describe, but not really explain Muslim religious coping. What causes such effects in the first place? Recent theoretical (Miner, Ghobary, Dowson, & Proctor, 2014) and empirical (Ghorbani, Watson, Omidbeiki, & Chen, 2016) developments suggest that Muslims may be anxious in their attachments to God. Distress may, therefore, encourage Muslims to turn to God for help with a resultant mobilisation of anxiety that introduces complexities into religious coping processes. This suggestion might be useful in the development of a Muslim Indirect Distress Mobilisation Hypothesis.

Third, a full understanding of religious coping may need to account for other aspects of Muslim faith. In a recent study, Muslim spirituality moderated influences of both Positive and Negative Religious Coping on the distress that Pakistanis experienced about the public effects of terrorism (Khan et al., 2016). When spirituality was low, both forms of coping predicted higher public distress, but when spirituality was high, both measures displayed inverse linkages with public distress. Moderation effects did not occur with two other terrorism-related distress measures; so, the influence of spirituality may be limited. Still, such data imply that comprehensive accounts of distress mobilisation may need to be framed within broader understandings of Muslim spirituality and religiosity.

Finally, the present and previous data may have something to say about applied efforts to help Muslims cope with stress (Ghorbani, Watson, Tahbaz et al., 2016). Adaptive forms of coping like those associated with IPRC and Positive Religious Coping are compatible with adaptive Muslim religious motivations and presumably should be encouraged. Maladaptive forms of coping like those recorded by PAR and Negative Religious Coping instead show no relationship with these religious motivations after statistical procedures control for their covariance with beneficial forms of religious coping. Maladaptive forms of religious coping, therefore, can apparently be discouraged without any meaningful challenge to Muslim religious commitments.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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