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# Religiosity, Social Self-Esteem, and Psychological Adjustment: On the Cross-Cultural Specificity of the Psychological Benefits of Religiosity

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Studies have found that religious believers have higher social self-esteem (Aydin, Fischer, & Frey, 2010; Rivadeneyra, Ward, & Gordon, 2007) and are better psychologically adjusted (Koenig, McCullough, & Larson, 2001; Smith, McCullough, & Poll, 2003) than nonbelievers. Is this relation true across cultures—which would attest to the robustness of religiosity as a wellspring of psychological benefits—or is it found only in specific cultures—which would attest to the relativism of religiosity and its embeddedness within a larger cultural framework? The religiosity-as-social-value hypothesis sides with the latter possibility.

The religiosity-as-social-value hypothesis posits that religiosity receives high social valuation in most societies (Sedikides, 2010) and that, consequently, religious believers are highly valued members of most societies (Sedikides & Gebauer, 2010). Being socially valued is associated with psychological benefits (e.g., social self-esteem, psychological adjustment; Rokeach, 1973; Sedikides & Strube, 1997). The hypothesis predicts, then, that believers will enjoy more psychological benefits in cultures that tend to value religiosity more; alternatively, the less a culture values religiosity, the more likely it is that believers and nonbelievers will enjoy equivalent psychological benefits. Here, we report a study in which we tested this hypothesis.

## Method

Our study involved an analysis of data from 187,957 individuals (47% female, 53% male; mean age = 37.49 years,  $SD = 12.22$ ) included in the eDarling data set (Gebauer & Neberich, 2011). They completed the measures discussed here while setting up profiles at the eDarling online-dating site. Respondents were from 11 European countries, and sample sizes were similar across countries.

## Personal religiosity

Our measure of personal religiosity was the response to a single item: “My personal religious beliefs are important to me” (1 = *not at all*, 7 = *very much*). Single-item religiosity measures are common (Norenzayan & Hansen, 2006). An online validation study ( $N = 347$ ) showed that our measure loaded highly (.90) on a single factor together with the Duke Religion Index (Koenig, Meador, & Parkerson, 1997) and the Global Religiosity Measure (Gebauer & Maio, in press).

## Psychological adjustment

Respondents were asked, “How well does each of the following generally describe you?” (1 = *not at all*, 7 = *very much*). Ten adjectives, related to psychological adjustment, followed: “adaptable,” “calm,” “cheerful,” “content,” “energetic,” “healthy,” “optimistic,” “positive,” “resilient,” and “stable” ( $r = .84$ ). The online validation study revealed that this measure loaded highly (.89) on a single factor together with well-validated measures of life satisfaction, positive affect, optimism, well-being, and vitality.

## Social self-esteem

Respondents completed an adapted version of Heatherton and Polivy’s (1991) State Self-Esteem Scale that assessed trait self-esteem (Gebauer, Leary, & Neberich, in press). For the Social Self-Esteem subscale, they indicated how “skilled” they perceived themselves to be in “social situations,” “making new friends,” and “socializing,” as well as how “easy” it was for

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them “to engage in conversations with people I have just met” (1 = *not at all*, 7 = *very much*;  $r = .77$ ). In the online validation study, this four-item subscale loaded highly (.84) on a single factor together with the Social Self-Esteem subscale of the German State Self-Esteem Scale (Rudolph, Schröder-Abé, & Schütz, 2009).

### Country-level religiosity

For each country, we calculated the mean of respondents’ personal-religiosity scores (Country-Level Index 1). We also derived two alternative indices of country-level religiosity. First, for each country, we averaged respondents’ indicated interest in church involvement (Country-Level Index 2). Second, we relied on the percentage of people in each country who answered “no” to the following 2007–2008 Gallup World Poll question: “Does religion occupy an important place in your life?” (“Religion in Europe,” n.d., para. 2.1; Country-Level Index 3). We reverse-scored Index 3, so that higher scores indicated greater religiosity for all three indices.

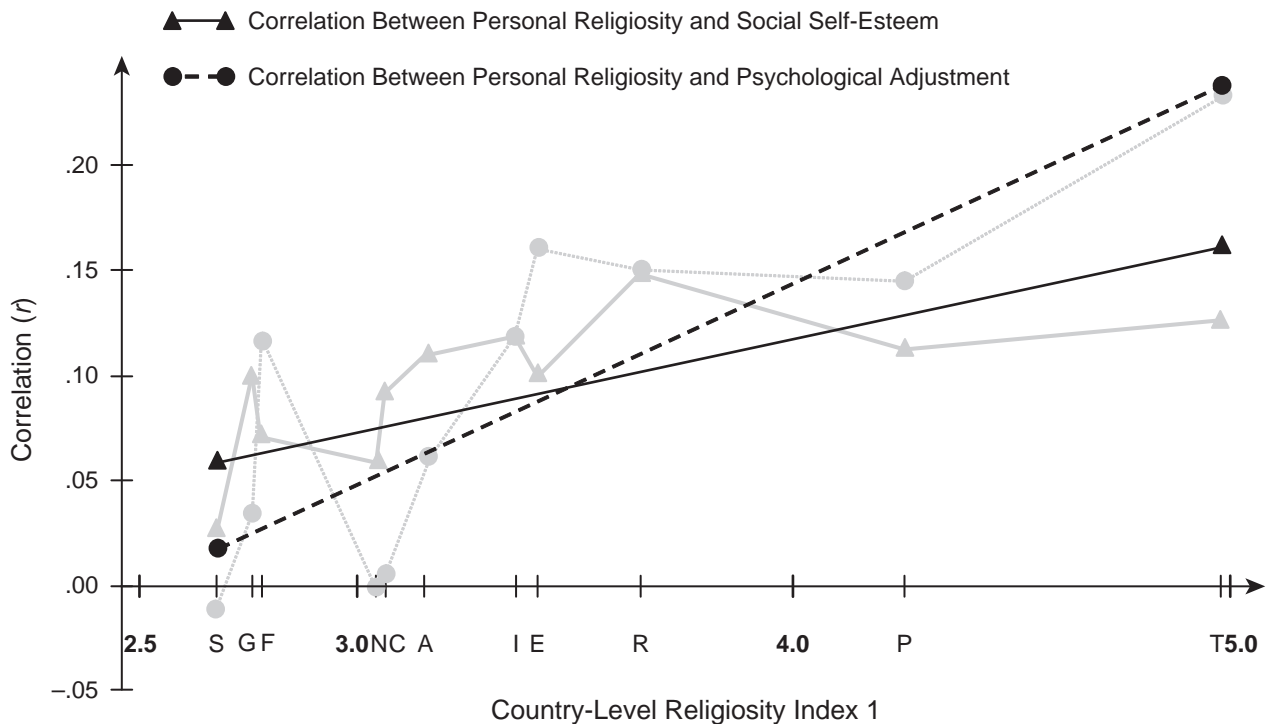
### Results

The correlation between social self-esteem and psychological adjustment was moderately positive,  $r(187,957) = .549$ ,  $p = .001$ ; the two indices were sufficiently distinct to be treated as complementary indicators of the psychological benefits of religiosity. Further, the correlations between personal religiosity and social self-esteem,  $r(187,957) = .105$ , and between

personal religiosity and psychological adjustment,  $r(187,957) = .131$ , were similar to correlations previously reported for self-esteem,  $r(34,129) = .08$  (Donahue & Benson, 1995), and life satisfaction,  $r(52,624) = .08$  (Diener & Clifton, 2002).

We used multilevel modeling (HLM 6.06; Raudenbush, Bryk, & Congdon, 2004) to analyze the data, because respondents were nested in countries. We regressed social self-esteem (Level 1) on personal religiosity (grand-mean centered; Level 1), country-level religiosity (Index 1; grand-mean centered; Level 2), and their cross-level interaction.<sup>1</sup> Higher personal religiosity predicted higher social self-esteem,  $b = 0.056$ ,  $SE = 0.001$ ,  $t(187,953) = 41.57$ ,  $p = .001$ . Crucially, country-level religiosity qualified this effect, producing a cross-level interaction,  $b = 0.017$ ,  $SE = 0.002$ ,  $t(187,953) = 9.02$ ,  $p = .001$ . The link between personal religiosity and social self-esteem was stronger in more religious countries (Fig. 1). An analysis using Country-Level Index 2 replicated the main effect,  $b = 0.056$ ,  $SE = 0.001$ ,  $t(187,953) = 41.93$ ,  $p = .001$ , and the cross-level interaction,  $b = 0.027$ ,  $SE = 0.003$ ,  $t(187,953) = 8.53$ ,  $p = .001$ . An analysis using Country-Level Index 3 also replicated the main effect,  $b = 0.057$ ,  $SE = 0.001$ ,  $t(187,953) = 42.11$ ,  $p = .001$ , and the cross-level interaction,  $b = 0.0005$ ,  $SE = 0.00006$ ,  $t(187,953) = 9.16$ ,  $p = .001$ .<sup>2</sup>

We repeated the initial multilevel analysis with psychological adjustment as the criterion. Higher personal religiosity predicted better psychological adjustment,  $b = 0.044$ ,  $SE = 0.001$ ,  $t(187,953) = 43.27$ ,  $p = .001$ . Again, country-level religiosity qualified this effect,  $b = 0.042$ ,  $SE = 0.001$ ,  $t(187,953) = 28.78$ ,  $p = .001$ . The relation between personal religiosity and



**Fig. 1.** Zero-order correlations between personal religiosity and social self-esteem and between personal religiosity and psychological adjustment as a function of country-level religiosity (CLR; scale from 1, *not at all religious*, to 7, *very much religious*). The following nations were included in this analysis: Sweden (S; CLR = 2.68;  $N = 19,457$ ), Germany (G; CLR = 2.76;  $N = 19,318$ ), France (F; CLR = 2.78;  $N = 18,105$ ), The Netherlands (N; CLR = 3.04;  $N = 13,552$ ), Switzerland (C; CLR = 3.06;  $N = 11,183$ ), Austria (A; CLR = 3.15;  $N = 17,109$ ), Italy (I; CLR = 3.36;  $N = 13,899$ ), Spain (E; CLR = 3.41;  $N = 17,339$ ), Russia (R; CLR = 3.65;  $N = 19,734$ ), Poland (P; CLR = 4.25;  $N = 18,789$ ), and Turkey (T; CLR = 4.98;  $N = 19,472$ ). Gray symbols show the actual zero-order correlations across countries; black lines and symbols represent the best-fitting regression lines.

psychological adjustment was stronger in more religious countries (Fig. 1). An analysis using Country-Level Index 2 replicated the main effect,  $b = 0.045$ ,  $SE = 0.001$ ,  $t(187,953) = 44.17$ ,  $p = .001$ , and the cross-level interaction,  $b = 0.069$ ,  $SE = 0.002$ ,  $t(187,953) = 28.16$ ,  $p = .001$ . An analysis using Country-Level Index 3 also replicated the main effect,  $b = 0.046$ ,  $SE = 0.001$ ,  $t(187,953) = 44.76$ ,  $p = .001$ , and the cross-level interaction,  $b = 0.001$ ,  $SE = 0.00004$ ,  $t(187,953) = 22.09$ ,  $p = .001$ .<sup>3</sup> Indeed, in nonreligious Sweden, for example, believers and nonbelievers enjoyed equivalent psychological benefits (Fig. 1).

## Coda

The religiosity-as-social-value hypothesis posits that the psychological benefits of religiosity (benefits to social self-esteem and psychological adjustment) are culturally specific: They should be stronger in countries that tend to value religiosity more. Data from more than 180,000 individuals across 11 countries were consistent with this prediction.

Overall, believers claimed greater social self-esteem and psychological adjustment than nonbelievers did. However, culture qualified this effect. Believers enjoyed psychological benefits in countries that tended to value religiosity, but did not differ from nonbelievers in countries that did not tend to value religiosity. Replication of this pattern with non-self-report data would be desirable. Regardless, the results suggest that religiosity, albeit a potent force, confers benefits by riding on cultural values.

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## Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

## Notes

1. Results were identical when Level 1 variables were centered around group-means.
2. Turkey scored exceptionally high on country-level religiosity and is the sample's only non-Christian country. Yet results were replicated when we excluded the Turkish sample—main effects:  $bs = 0.055$ ,  $SEs = 0.001$ ,  $38.50 < ts(168,481) < 38.97$ ,  $ps < .001$ ; cross-level interactions:  $0.0007 < bs < 0.03$ ,  $0.00008 < SEs < 0.003$ ,  $7.80 < ts(168,481) < 10.11$ ,  $ps < .001$ .
3. Results were replicated when we excluded the Turkish sample—main effects:  $bs = 0.038$ ,  $SEs = 0.001$ ,  $32.24 < ts(168,481) < 35.74$ ,  $ps < .001$ ; cross-level interactions:  $0.0006 < bs < 0.056$ ,  $0.00006 < SEs < 0.002$ ,  $10.59 < ts(168,481) < 20.95$ ,  $ps < .001$ .

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